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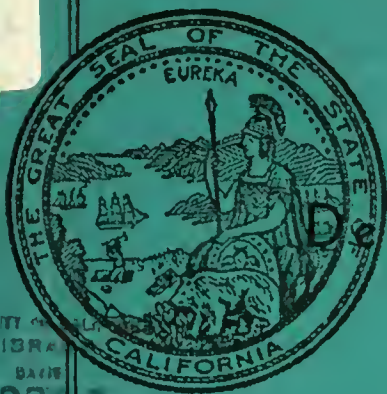
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BULLETIN No. 94-16

LAND AND WATER USE IN SACRAMENTO VALLEY NORTHEAST HYDROGRAPHIC UNIT

Volume I: Text

Preliminary Edition

APRIL 1966

HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

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LAND AND WATER USE BULLETINS

Bulletin No. 94 Series

Bulletin No. :	Hydrographic Unit Covered	: Year of Survey
94-1	Tule River	1957
94-2	Trinity River	1957
94-3	Yuba-Bear Rivers	1957-58
94-4	Smith River	1958
94-5	Shasta-Scott Valleys	1958
94-6	Klamath River	1958
94-7	Mad River-Redwood Creek	1958
94-8	Eel River	1958-59
94-9	Lost River-Butte Valley	1959
94-10	Mendocino Coast	1959
94-11	Russian River	1959
94-12	Sacramento Valley West	1959
94-13	Putah-Cache Creeks	1960
94-14	American River	1960
94-15	Sacramento Valley Floor	1961
94-16	Sacramento Valley Northeast	1962
94-17	Feather River	1962-63
94-18	Shasta Lake	1963

Other Land and Water Use Bulletins




Bulletin No. :	County or Drainage Area Covered	: Year of Survey
24	Coastal Los Angeles County	1955
70	Orange County	1957
71	Upper Santa Ana River Drainage Area	1957
101	Desert Areas of Southeastern California	1958
102	San Diego County	1958
103	San Luis Obispo and Santa Barbara Counties	1959
24-60	Coastal Los Angeles County	1960
121	Southern Lahontan Area	1961
122	Ventura County and Upper Santa Clara River Drainage Area	1961

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DEPARTMENT OF WATER RESOURCES
NORTHERN BRANCH





LAND AND WATER USE
SACRAMENTO VALLEY
NORTHEAST HYDROGRAPHIC UNIT

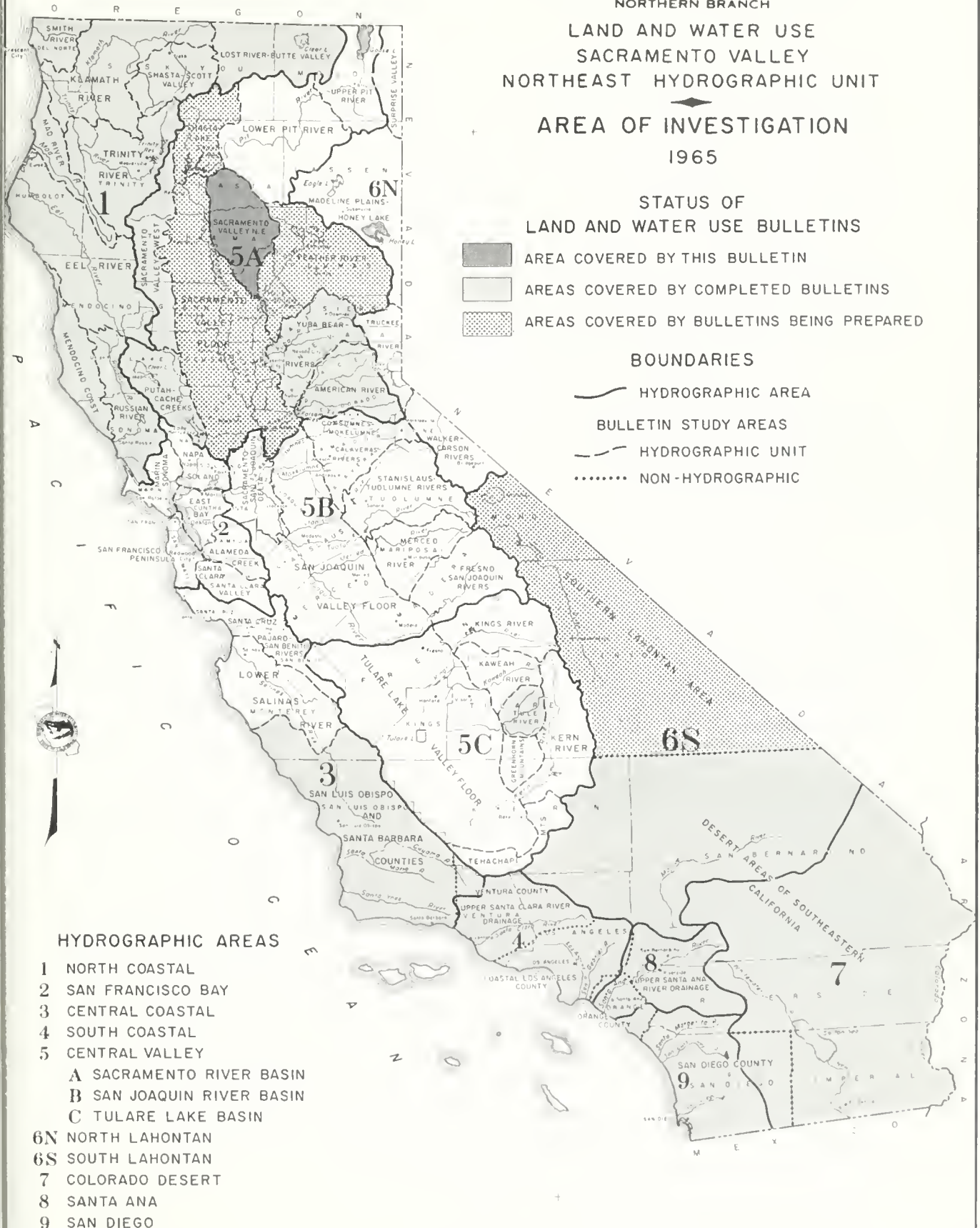
AREA OF INVESTIGATION
1965

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FOREWORD

This bulletin is one of the No. 94 Series, which presents land and water use data for various watersheds as a basis for planning the State's future water development program.

Because of California's rapid urban and agricultural expansion in areas of limited water resources and its seasonal and long-term fluctuations of streamflow, the State is faced with a growing need for projects to store large quantities of water and to transport them over long distances to areas of deficiency. To plan the projects necessary to satisfy this need without depriving the areas of origin of water needed there, the future water requirements of all areas of the State must be predicted as accurately as possible.

In Bulletin No. 2, "Water Utilization and Requirements of California", June 1955, the State Water Resources Board published estimates of the future water needs of the State. Those estimates, however, are now obsolescent and not sufficiently detailed for the current planning program.

The 1956 Legislature authorized an investigation to determine the water resources and water requirements of the respective watersheds in the State. Among the items on which the Legislature directed the Department to report are: (1) the present use of water in each watershed, (2) the quantities of water originating within each watershed and the quantities needed for future development of those watersheds, and (3) the water available for export from watersheds of origin and the areas which can be served thereby.

The necessary investigation was begun the same year. The first bulletins published under this program are the No. 94 Series, which report the status of land and water use and the classification of lands in each watershed. This information, with economic and other factors, forms the groundwork for projecting future water requirements. These projections, made on a uniform basis for the entire State, are essential to selecting and scheduling the facilities necessary to satisfy all of California's water needs for the foreseeable future.

This report presents material which essentially parallels that in earlier bulletins of the No. 94 Series, but it initiates a new, simplified arrangement.

Volume I contains tables of data with a minimum of explanatory text. Chapters II, III, and IV present the water use, land use, and land classification data. Appendix A describes the procedures and standards employed. These procedures and standards are also applicable to other reports in the series.

Volume II contains maps showing land and water use and land classifications and explanations of the maps and symbols used.

ACKNOWLEDGMENT

The Department of Water Resources gratefully acknowledges the information furnished and the time and effort willingly expended by the various water users and residents of the Sacramento Valley Northeast Hydrographic Unit and by agencies of the federal, state, and local governments.

The assistance of all persons and agencies whose cooperation made possible the review of the original data is especially appreciated. The Farm Advisors of Butte, Shasta, and Tehama Counties reviewed the land classification maps. Personnel of the county water agencies assisted in arranging local review sessions. Various other organizations and individuals most graciously made suitable facilities available for the meetings.

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DEPARTMENT OF WATER RESOURCES

D. BOX 388
SACRAMENTO



February 2, 1966

Honorable Edmund G. Brown, Governor
and Members of the Legislature
of the State of California

Gentlemen:

Bulletin No. 94-16 describes the land use, classification of lands, and water use within the Sacramento Valley Northeast Hydrographic Unit.

Bulletins of the No. 94 series provide information to be used to estimate the amount of water that can be used beneficially within the area. Amounts of water surplus or deficiency will be determined by comparing the estimated needs with the local water resources.

Sincerely yours,

William E. Warne
Director

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

EDMUND G. BROWN, Governor, State of California
HUGO FISHER, Administrator, The Resources Agency
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Coordinated Statewide Planning Program
are coordinated under the direction of the
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James L. Welsh. Chief, Water Utilization Analysis Section

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WILLIAM M. CARAH
Executive Secretary

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ABSTRACT

Bulletin No. 94-16

Land and Water Use in Sacramento Valley Northeast Hydrographic Unit

The Sacramento Valley Northeast Hydrographic Unit covers 2,051 square miles, virtually all within Butte, Shasta, and Tehama Counties (about one square mile in Plumas County). The area lies east of the valley floor and comprises the watersheds of the smaller streams between those of the Pit River on the north and the Feather River on the south. The topography of the unit is mostly rough, with deeply eroded canyons which drain the westward slope of the volcanic Cascade Range. Elevations range from 300 - 500 feet near the Sacramento Valley floor to about 10,500 feet at Lassen Peak.

In the water use survey, 323 systems for diverting surface water were located and documented--266 for irrigation, 42 for electric power generation, and 15 for other uses. In the land use survey, 13,216 acres were found to be irrigated, 1,532 dry-farmed, and 6,302 in urban use.

Nearly 145,000 acres (11 percent of the unit's area) are suitable for irrigation. About 30,300 acres are suitable for recreational development, including 1,082 acres already developed outside the public park areas which consist of 18,678 acres.

Court decrees have established various rights to the use of water from Butte Creek, Digger Creek, Clover Creek, North Cow Creek, and Oak Run Creek. Four public agencies divert water from streams within the unit for irrigation or domestic purposes. They are Deer Creek Irrigation District, Paradise Irrigation District, the City of Red Bluff, and Lassen Volcanic National Park.

CHAPTER I. INTRODUCTION

This bulletin reports data on 1962 land and water use and a classification of lands as to their probable need for water service for the Sacramento Valley Northeast Hydrographic Unit. This unit consists of the eastern slope of the Sacramento Valley between the watersheds of the Pit and Feather Rivers.

The unit, an area of 2,051 square miles on the western slope of the Cascade Range, contains portions of Shasta, Tehama, and Butte Counties and a very small part (about one square mile) of Plumas County. Portions of Lassen National Forest and Lassen Volcanic National Park lie within the unit. The location of the unit is shown on page iii, along with those watersheds covered by other land and water use reports.

The topography of the unit consists of westward sloping irregular ridges and plateaus. The area is broken by the canyons of the west- and southwest-flowing streams from Cow Creek on the north through Butte Creek on the south. These canyons, especially in the central and southern portion, are mostly deep and narrow. The northern and western part of the unit is a broad plateau tilted up toward the volcanic cones on the east. The eastern edge of the unit consists of rugged mountain peaks and ridges. Elevations vary from about 300 feet near the Sacramento Valley floor to 10,457 feet at Lassen Peak, the outstanding feature of the unit.

The geology of the unit consists mainly of Tertiary and Quaternary volcanic rocks, which form the Cascade Range and crop out along the divide in the eastern part of the area. These volcanic rocks also form the tilted plateaus at the lower elevations along the western part of the unit. Lassen

Peak, last active in 1915-18, is considered the only active volcano in continental United States outside Alaska.

The soils of this hydrographic unit may, in general, be divided into two groups. These are: (1) the residual soils developed in place by the disintegration and weathering of the underlying bedrock, and (2) the alluvial soils formed from transported sediments of preexisting soils and other materials.

The most prominent residual soils are on the plains and ridge tops forming the lower western slope of the Cascade Range, and have a low potential for irrigated agriculture due to their stoniness and shallow depth. At the higher elevations where the rainfall is greater, the deeper forested soils predominate. Most of these soils are best suited to forest management for range and timber production, but some portions are now irrigated.

The larger bodies of irrigable alluvial soil are in the northwestern portion of the hydrographic unit along the creeks in the Cow Creek and Battle Creek subunits.

Precipitation in the hydrographic unit originates from general winter storms of North Pacific origin. Mean annual precipitation varies from 22 inches (mostly rain) at the western edge of the unit to about 90 inches (mostly snow) at Lassen Peak, and averages about 40 inches for the whole unit.

Direct runoff from precipitation and ground water outflow from the porous volcanics in the uplands result in a mean annual unimpaired runoff of 2,030,000 acre-feet.

At higher elevations in the unit, native vegetation consists of extensive forests of pine, fir, and cedar; while at lower elevations, grasses, manzanita brush, and oak are relatively abundant. Aspen, cottonwood, alder, and willow grow along the streams that created the many canyons which traverse the unit.

Prior to the gold rush of 1849, the Yana Indians inhabited most of the area. By 1914, the last of these Indians had been killed or driven off by the ranchers in the valley. From that time on, more and more of the unit has been used by ranchers for range land and other purposes. Today, the unit is used mainly for livestock grazing, logging, and recreation, although there is a limited amount of more or less diversified agriculture, particularly in the Cow and Butte Creek drainages.

The only town of significant size within the area is Paradise, near the southern tip of the unit. In 1960, about two-thirds of the unit's total population of 12,300 persons lived in this community. The remainder of the population is in small communities, such as Forest Ranch, Mineral, Paynes Creek, Shingletown, Manton, and on scattered farms and ranches.

For these studies, the hydrographic unit has been divided into nine hydrographic subunits which are shown on the "Index to Figures and Subunits" in Volume II. Areas of the subunits are given in the following table:

TABLE 1
AREAS OF SUBUNITS

Subunit	: Area per county, in acres :				: Total area	
	: Butte	: Plumas	: Shasta	: Tehama	: Acres	: Square Miles
Antelope Creek	0	0	0	123,185	123,185	192
Battle Creek	0	0	117,686	113,033	230,719	361
Butte Creek	110,344	628	0	5,171	116,143	181
Campbell Mound	11,547	0	0	45,795	57,342	90
Chico Creek	64,302	0	0	23,417	87,719	137
Cow Creek	0	0	330,352	0	330,352	516
Deer Creek	0	0	0	139,046	139,046	217
Mill Creek	0	0	3,315	142,360	145,675	228
Paynes Creek	<u>0</u>	<u>0</u>	<u>0</u>	<u>82,641</u>	<u>82,641</u>	<u>129</u>
	186,193	628	451,353	674,648	1,312,822	2,051
Percent of Total	14.18	0.05	34.38	51.39		

CHAPTER II. WATER USE

This chapter presents the results of the survey of surface water diversions and their use in the Sacramento Valley Northeast Hydrographic Unit. The survey was made in 1961 and 1962 in compliance with the Legislature's directive to report the "present use of water in each watershed" of the State. Descriptions of the methods used and other details of the survey are presented in the "Water Use Survey" section of Appendix A.

The lands served by irrigation diversions were identified during the survey, and the land use was delineated concurrently on aerial photographs. Projections of these delineations onto maps, as described under "Land Use Survey" in Appendix A, were used to determine the acreage of irrigated land associated with each diversion system. The total acreage associated with each diversion is given in this chapter. A breakdown of these acreages by crop is given in Chapter II, "Land Use". The diversion points and main conduits of all diversions are shown on the Land and Water Use figures in Volume II.

The five tables containing most of the data relative to the diversion systems and water rights in the unit are placed together at the end of this chapter. These tables and the data included in each are:

Table 2, "Descriptions of Surface Water Diversions", gives the locations, owners, sources, uses, physical descriptions, etc., of the 323 diversion systems studied. A detailed explanation of this table is included in Appendix A.

Table 3, "Butte Creek Adjudication", is prepared to clarify the discussion of this adjudication on page 6 and to identify the presently existing diversions based on rights set by the adjudication.

Table 4, "Digger Creek Water Rights by Adjudications and Watermasters", prepared to supplement the discussion on page 7, summarizes the rights to the waters of Digger Creek.

Table 5, "Applications to Appropriate Water", lists the applications for the use of water in the unit on file with the State Water Rights Board on January 25, 1965. Those diversions reported in Table 2 to which such applications pertain are indicated.

Table 6, "Index to Surface Water Diversions", is an alphabetical listing of all diversion names and owners giving the location within the report of all information about each diversion.

Litigation Concerning Water Rights

This section presents brief discussions of adjudications of water rights on five stream systems in the hydrographic unit. These discussions supplement information concerning water rights listed as "Adjudicated" in Table 2. Watermaster service has been established in each of these five areas. Litigation is now pending concerning water rights on the portions of the Cow Creek Watershed not previously adjudicated.

Butte Creek Adjudication

A petition for determination of rights to use the waters of Butte Creek and its tributaries above Western Dam near Nelson was filed June 15, 1939, with the Division of Water Rights, Department of Public Works. The Division investigated the flow and use of these waters and prepared a plan for a trial distribution. The plan was put into operation during the 1940 irrigation season and again, in modified form, during the 1941 season.

On April 14, 1942, the Division entered its "Order of Determination" of rights for use of waters on Butte Creek and its tributaries. A trial was held in the Superior Court of Butte County, and a decree, No. 18917, was issued on June 22, 1942.

By this decree, which is outlined in Table 3, the rights to the waters of the Butte Creek stream system are divided into five groups. The rights within three of these groups are further divided into classes:

"special", "interrelated", and "surplus". The "special" class rights are superior to those of the other two classes, and the "interrelated" rights are next. Within the "interrelated" class as many as four priorities are assigned. The "surplus" rights are inferior to all others, regardless of group.

Digger Creek Adjudications

Litigation over the waters of Digger Creek has occurred six times. Four of these cases, listed below, established or reaffirmed the rights of various ditches:

Case No. 2213	Gransbury vs. Edwards	August 12, 1899
Case No. 3214	Wells vs. Pritchard	May 27, 1913
Case No. 3327	Harrison, et al, vs. Kaler, et al	October 16, 1917
Case No. 4570	Herrick vs. Forward	February 24, 1927

The Herrick vs. Forward case, No. 4570, Superior Court of Tehama County, most nearly approached an actual adjudication of the stream. However, though it recapitulated earlier decisions, it failed to resolve the matter of apportionment during periods of low flow, and therefore did not end the difficulties. The other two cases dealt only with matters of measurement, use, etc., of a few specific ditches.

In 1963, as a result of a dispute with other uses, Forward Brothers Properties requested the Department of Water Resources to provide watermaster service. After an investigation and report of findings, this service was initiated on July 1, 1964. The decrees of the various cases, No. 4570 in particular, together with up-to-date information as to the transfer of certain rights to other than the original ditches, were combined to determine the rights pertinent to the diversions then in use. These ditches and their respective rights are listed in Table 4.

Clover Creek Adjudication

A suit brought by Millville Ditch Company vs. Hufford, et al., was referred to the Division of Water Rights, Department of Public Works, on August 15, 1926. The Division investigated the water supply and requirements in the Clover Creek drainage area and submitted its report on August 1, 1932. The Shasta County Superior Court judgment and decree for this case, No. 6904, was rendered on October 4, 1937. The major items set forth in the decree were: (a) the lands to be served by water allotted in the decree, (b) the maximum allotments assigned to those lands, (c) the locations of the various diversion points, and (d) the amounts assigned to the various landowners. The rights allotted were declared "equal in priority and correlative in right...."

At all times when the water available is not adequate to supply the specified allotments, the owners are required to prorate the available supply in the ratios of their allotments. A similar prorating of surplus water, when available, is also prescribed.

According to the decree, the riparian rights of lands within the stream system other than those described are not limited or restricted. The allotments assigned to the lands described may be transferred to other lands which are along or near the stream and under the same ownership.

All use under the rights set forth in the decree are subject to the doctrine of reasonable use (Appendix A, page 95) and are applicable during the irrigation season, May 1 through October 31, of each year.

A special right, subject to those mentioned above, was given for the Mill Ditch, D-33N/LE-20G1, to divert for power only. The water shall then be discharged directly into Anderson Swale.

Certain owners are entitled to divert and use, in specified shares, the waters (including waste and return flow) of Anderson Swale.

North Cow Creek Adjudication

The Division of Water Rights was ordered by the Shasta County Superior Court to referee the establishment of water rights on North Cow Creek and its tributaries. Following submission of the referee's report to the court, the case was tried, and the decree, No. 5804, was rendered on April 29, 1932.

The adjudication divides the water users in the watershed into the following groups: Cedar Creek Users, North Cow Creek Class A Users, and North Cow Creek Class B Users. All rights are applicable during the irrigation season, May 1 through October 31; and within each group the rights are "equal in priority and correlative in right...." Schedule 1 of the decree lists the acreages of the various owners.

Schedule 2 assigns continuous flow allotments to the Cedar Creek users. These users are entitled to continuous use of Cedar Creek water within their maximum irrigation allotments provided the flow is adequate. When the flow is inadequate to satisfy these allotments, the users must divide the available water in proportion to their maximum irrigation allotments.

Schedules 3 through 6 specified for the North Cow Creek Class A and Class B users "maximum" allotments for irrigation and "minimum" allotments for domestic and stockwatering uses. According to the decree, when the net available water supply was less than 28.60 cfs these two groups were entitled to divert from North Cow Creek within their "maximum" allotments, alternating for seven-day irrigation periods. During their respective nonirrigation periods, they could divert only their "minimum" allotments. When the net available water supply was in excess of 28.60 cfs, both classes were permitted to divert continuously as needed within their "maximum" allotments.

However, in the years following the decree, it was found and agreed to be more beneficial for the two classes to irrigate on a continuous basis throughout the irrigation season. This practice is now followed under supervision of the watermasters.

The rights of various users within the area to use water from isolated springs are described individually in the adjudication. Special rights were also assigned as explained in the following paragraph.

The decree authorized 3.00 cfs to be diverted through the Welch and Strayer Ditch, D-33N-1E-5Q1, and 2.00 cfs through the Excelsior Ditch. Since the latter ditch is not now being used, the entire 5 cfs is diverted through the Welch and Strayer Ditch. Further information on the use of this water is described in the Oak Run Creek Adjudication below.

Oak Run Creek Adjudication

On April 25, 1923, the Shasta County Superior Court requested the Division of Water Rights to investigate and provide for the court a description of the water supply, diversions, and the use of water from Oak Run Creek. The Division made its investigation and published its report in April 1925. The decree, Case No. 5701, was issued on July 22, 1932.

The decree established the acreages irrigated, the allotments of water in various ditches, and the allotments of water to the individual users.

The decree also defined the waters so allocated as those of Oak Run Creek as well as the waters imported through the Welch and Strayer diversions, D-33N/1E-5Q1 and -5Q2. Part of the imported water is used from the ditch on its route to Oak Run Creek. The remaining portion is released into Oak Run Creek for use by downstream users on both Oak Run Creek and the Welch and Strayer Ditch redirection (D-33N/1W-15K1).

Whenever the flow of Oak Run Creek, including the imported water, is less than 5.40 cfs, the Welch and Strayer redirection is entitled to divert 43 percent, and the remaining 57 percent is to be allowed to flow past the intake for use by lower users. When the flow of Oak Run Creek below the Welch and Strayer redirection intake is insufficient to supply the allotments of the lower users, the water is to be prorated in proportion to the allotted amounts.

Public Water Agencies

Four public agencies divert water from streams within the unit for irrigation or domestic use.

1. Deer Creek Irrigation District
2. Paradise Irrigation District
3. City of Red Bluff
4. Lassen Volcanic National Park

County officials and agencies responsible for water matters in the unit are the Butte County Director of Public Works, Shasta County Director of Water Resources and County Water Committee, and Tehama County Flood Control and Water Conservation District.

Imports and Exports

Among the diversion systems reported herein, there are eight which divert water within the unit for export to neighboring units, and four which bring water into the unit from outside sources. These 12 diversions are given in the following list.

<u>Subunit</u>	<u>Location Numbers*</u>	
	<u>Export Diversions</u>	<u>Import Diversions</u>
Antelope Creek	D-27N/2W-9G1	None
Battle Creek	D-29N/2W-6A1 D-29N/2W-6A2	None
Butte Creek	None	D-21N/4E-6F1 D-24N/4E-31M1
Chico Creek	D-22N/2E-22K1	None
Cow Creek	D-31N/2W-6F1 D-32N/3W-9L1 D-34N/1E-20B1 D-34N/1W-13N1	D-34N/1E-18K1 D-34N/1E-18R1
Deer Creek	D-25N/1W-23D1	None
Mill Creek	D-26N/1W-18F1	None

* Location numbers of import diversions identify the points of entry into Sacramento Valley Northeast Hydrographic Unit.

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and figure	Diversion name and/or owner	Source	Water use in 1962		Type	Amount	Reference ^a	Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use						
ANTELOPE CREEK SUBUNIT										
027N/24-P1 (3) Pt 10	Antelope Creek Div. City of Red Bluff	Antelope Creek	Export*	(*)	Approp. Agreement	-- (*)	pk. 114, Page 247 ^b	1890	Gravity; concrete dam 15 feet high, 125 feet long with 12-inch steel pipe to city of Red Bluff.	Former owner: Red Bluff Water Co. Export to Sacramento Valley Floor H.U. This diversion supplemented by ground water. Water from this diversion for use outside the city limits is restricted to 2,000 cubic feet per month between July 1 and October 1 of each year.
027N/24-P2	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; direct diversion to 1.4 miles of earth pipe.	
027N/24-P3	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; diversion 1/4 mile of earth pipe.	
027N/24-P4	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; earth dam 1 foot high, 3 feet long with 3-inch pipe.	Former owner: Sierra water Co. Service small from 1893 to 1900.
027N/24-P5	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; wind and concrete dam 2 feet high, 1/4 mile long with 1.5 miles of earth ditch.	11 acres of irrigated land are in Paynes Creek Subunit. Former owner: A. L. Brown.
027N/24-P6	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	(c)	--	--	1890	Gravity; earth ditch 1.25 mile long.	
027N/24-P7	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; dam 2 feet high, 1 foot long with short earth ditch and 500 feet of 12-inch steel pipe.	
BATTLE CREEK SUBUNIT										
027N/24-P8	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; 11 feet of 12-inch steel pipe to 2 miles of earth ditch.	Former owners: Hazen, Johnson. Some of the owners have changed since 1902. Previously irrigated an additional 28 acres.
027N/24-P9	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; concrete dam 1 foot high, 1/4 mile of earth pipe.	Former owner: Brown.
027N/24-P10	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; 1/4 mile of 12-inch steel pipe.	Former owner: Brown.
027N/24-P11	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; concrete dam with 1/4 mile of earth pipe.	Former owner: Brown.
027N/24-P12	City of Red Bluff	Antelope Creek	Irrig. Domestic Stock.	Water by flood	Agreement	--	--	1890	Gravity; concrete dam with 1/4 mile of earth pipe.	Former owner: Brown.

^a See remarks column.

For lettered footnotes, see last page of table.

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

* See remarks column.
For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a			
BATTLE CREEK SUBUNIT (Continued)										
D-20N/24-642 (Export) 13-20	F. W. Fillmore R. G. Frey, M.D. W. H. Tupman	Battle Creek	Export*	(*)	Approp.	--	--	Prior 1900	Gravity; direct diversion to earth ditch with concrete headgate 75 feet below intake.	Former owners: Blodgett, Buckley, Herbert Broe, Jim Long, Love. Export to Sacramento Valley Floor Hydrographic Unit.
D-30N/1E-8N1 13-21	G. C. Manning	Tributary to Baldwin Creek	Irrig. Domestic	9 acres by flooding (b)	Riparian	--	--	Prior 1945	Gravity; dam 1 foot high, 2 feet wide with short earth ditch and small reservoir.	Former owner: Henry Pruden.
D-30N/1E-16D 13-21	Bruce Barris*	Springs tributary to North Fork Battle Creek	Irrig. Stock. Domestic	37 acres by flooding and sprinkler 100 head (b)	Deeded	--	--	1871	Gravity; earth dam 18 feet high, 750 feet long with 25-acre-foot reservoir.	Former owners: Mull, Steve Schneider, Bob Connor. Ownership changed to A. B. Casey since 1962.
D-30N/1E-21H 13-22	Isbory and Ruby Blodgett	Digger Creek	Irrig. Stock. Domestic	33 acres by flooding* 45 head (b)	Riparian	--	--	1867	Gravity; concrete dam 10 feet high 40 feet long with wooden flume to 0.3 mile of earth ditch.	Former owners: Childs, Meyers. Previously irrigated an additional 5 acres.
D-30N/1E-21L 13-22	Ben-ten-Wecker Ditch Al Reck Leatha J. Walker	Digger Creek	Irrig. Stock. Domestic	21 acres by flooding 50 head (b)	Riparian	--	--	1875	Gravity; earth and rock dam 3 feet high, 60 feet long with 1.2 miles of earth ditch.	Former owner: Coffey.
D-30N/1E-2 13-22	Harrison Ditch Lloyd R. Taylor Mrs. Anna C. Hennessy	Digger Creek	Irrig. Stock. Domestic	29 acres by sprinkler 30 head (t)	Adjud.	0.3c cfs	Table 2 ^v	1865	Gravity; concrete, rock, and board dam 4 feet high, 30 feet long with wooden flume and 0.75 mile of earth ditch.	Former owners: Olson, Jennings, De la Montanya.
D-30N/1E-23L 13-22	Ben-ten-Wecker Ditch Dale Gray, et al.	Digger Creek	Irrig. Stock. Domestic	68 acres by sprinkler* 200 head 12 connections	Adjud.	2.20 cfs	Table 2 ^v	Prior 1900	Gravity; concrete, rock and board dam 3 feet high, 20 feet long with 2.4 miles of earth ditch.	Some of owners have changed since year of survey. Previously irrigated an additional 31 acres. Also irrigates 5 acres of cemetery.
F-30N/1E-24 13-21	Wice-Bender Ditch All her family	Digger Creek	Irrig. Stock. Domestic Power	68 acres by flooding 160 head (t)	Riparian	--	--	1865	Gravity; concrete and rock dam 4 feet high, 15 feet long with 0.5 mile of earth ditch.	Former owners: W. M. Stone, A. A. Moore.
D-30N/1E-25 13-21	Gordon Martin	Digger Creek	Irrig. Stock.	1 acre* 100 head --	Riparian	--	--	Prior 1900	Gravity; log dam 1 foot high, 6 feet wide with short earth ditch.	Former owners: Est, Forward, Joe Lee, Gradsbury. These stock water also at 1-3/4/24-31 and 1-3/4-1. Previously irrigated an additional 40 acres.
D-30N/1E-26 13-21	Joe Lee	Digger Creek	Irrig. Stock.	--	Riparian	--	--	Prior 1900	Gravity; earth dam 3 feet high, 6 feet wide with 0.5 mile of earth ditch.	Former owners: Est, Forward, Joe Lee, Gradsbury. These stock water also at 1-3/4/24-31. Extent of use reported thereunder.
D-30N/1E-27 13-21	Joe Lee	Digger Creek	Irrig. Stock.	1 acre* 100 head --	Riparian	--	--	Prior 1900	Gravity; earth dam with short earth ditch.	Former owners: Est, Forward, Joe Lee, Gradsbury. These stock water also at 1-3/4/24-31. Extent of use reported thereunder.

^a See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Division name and/or owner	Source	Water use in 1962			Indicated date of appropriation or first use	Description of diversion system	Remarks		
			Purpose	Extent and method of use	Apparent water right					
					Type				Amount	
BATTLE CREEK SUBUNIT (Continued)										
D-3N/2E-16B 13-22	John Nail	Rock Creek	Recreation Domestic	Beating, fishing, swimming (c)	Approp.	32 afa	A-11538 ^a	Storage, earth dam 40 feet high, 200 feet long with 120-acre-foot reservoir.	Former owners: Hunsinger, T. Davanagh, A. F. Thoma, Helen E. and R. J. Thoma, Jr., Leonard A. Piles	
	John Nail	Rock Creek	Recreation	Beating, fishing, swimming	Approp.	168 afa	A-11538 ^a	Storage, earth dam 6 feet high, 500 feet long with 168-acre-foot reservoir.		Former owners: John Garner, A. F. Walker, White, Robert Black, J. Karp, and Leslie Ballester have the three; Gular and Pincus have the three; previously irrigated an additional 24 acres.
	John Nail	Rock Creek	Irrig.	10 acres	Riparian	--	--	Gravity, wood dam 4 feet high, 5 feet long with 100 feet of flume, 0.5 mile of earth ditch, and 0.3 mile of 12-inch steel pipe.		
D-3N/2E-16C 13-22	John Nail	Rock Creek	Irrig.	2 acres	Riparian	--	--	Gravity, wood dam 4 feet high, 5 feet long with 25 feet of flume, earth ditch and 30 feet of flume.	Former owners: Green, Bergin, J. West.	
D-3N/2E-17A 13-22	Hunter Ditch Billy Jean Miles Donald E. Thompson, M.D.	Rock Creek	Irrig. Recreation	32 acres Beating, fishing	Approp.	12.1 MI	--	Gravity and storage, log and sand dam 3 feet high, 30 feet long with 45 miles of earth ditch.		Former owners: John Garner, A. F. Walker, White, Robert Black, J. Karp, and Leslie Ballester have the three; Gular and Pincus have the three; previously irrigated an additional 24 acres.
D-3N/2E-17B 13-22	Garnier Ditch Marcel and Bettye LaTese F. O. Guert W. A. Richelieu	Rock Creek	Irrig. Domestic Stock Recreation	24 acres by flooding* 4 head --	Approp.* Approp.*	-- 0.5 cfs	-- A-11538 ^a	Gravity, rock dam 2 feet high, 15 feet long with 2.7 miles of earth ditch, and a 50-acre-foot offstream storage reservoir.		
D-3N/2E-17C 13-22	Williams Ditch George W. Archer	Digger Creek	Irrig. Domestic Stock	20 acres by flooding* 8 connections 7 head	Adjud.	1.1 cfs	Table 1 ^b	Gravity, rock dam 1 foot high, 4 feet long with a flume and 1 mile of earth ditch.	Former owners: Green, Bergin, J. West.	
D-3N/2E-21P 13-22	Boyle Ditch Boyle Ditch Water Users Association	Digger Creek	Irrig. Stock Domestic	120 acres by flooding* 50 head 4 connections	Adjud.	7.8 cfs	Table 2 ^b	Gravity, concrete and log dam, 2 feet high, 55 feet long with 6 miles of earth ditch.		Former owners: Green, Bergin, J. West.
D-3N/2E-24A 13-23	Mill Ditch Forward Bros.	South Fork Digger Creek	Domestic Power	26 connections --	Adjud.	7.8 cfs*	Table 2 ^b	Gravity, earth and log dam with 1.5 miles of earth ditch and 1.3 mile of 10-inch penstock.		
D-3N/2E-26B 13-23	Campbell Ditch Forward Bros.	Digger Creek	Irrig. Stock	138 acres by flooding 250 head	Adjud.	4.0 cfs	Table 2 ^b	Gravity, log dam 3 feet high, 2 feet long with a short flume, a culvert, and a short earth ditch.	Former owners: Green, Bergin, J. West.	
D-3N/2E-26C 13-23	Bergin Ditch Forward Bros.	Digger Creek	Irrig.	14 acres by flooding	Adjud.	1.2 cfs	Table 2 ^b	Gravity, rock and earth dam 1 foot high, 30 feet long with 0.4 mile of earth ditch.		Former owners: Green, Bergin, J. West.
D-3N/2E-26D 13-23	Randall Ditch Forward Bros.	Digger Creek	Irrig.	6 acres by flooding	Adjud.	0.4 cfs	Table 2 ^b	Gravity, earth and log dam 2 feet high, 15 feet long with 0.6 mile of earth ditch.		

^a See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
BATTLE CREEK SUBUNIT (Continued)										
D-3/N/26-27A1 13-23	Love's Mill Branch Forward Bros.	Digger Creek	Irrig.	(*)	Adjud.	2.0 cfs	Table 2 ^v	About 1870	Gravity; earth and log dam 4 feet high, 50 feet long with a short earth ditch.	Previously irrigated 67 acres. Not use in year of survey.
D-4/N/26-27C1 -9-22	T. J. Pritchard Ditch E. E. and R. N. Pritchard	Digger Creek	Irrig. Stock. Domestic	115 acres by flooding 50 head (b)	Adjud.	3.125 cfs	Table 2 ^v	Prior 1880	Gravity; earth and log dam 1.5 feet high, 40 feet long with a short earth ditch.	Former owners: T. J. Pritchard, H. M. Pritchard.
D-4/N/26-27D1 13-22	H. H. Pritchard Ditch R. N. Pritchard	Digger Creek	Irrig. Domestic	5 acres (b)	Adjud.	0.45 cfs	Table 2 ^v	1913	Gravity; rock dam with 0.3 mile of earth ditch.	Former owner: E. G. Pritchard.
D-3/N/24-25A1 13-21	Darrach Springs Fish Hatchery California Dept. Fish and Game	Darrach Creek	Fish Production Power Domestic	300,000 lbs. per year -- (b)	Adjud.	0.50 cfs	Page 3 ^v	1952	Gravity; concrete dam 3 feet high, 70 feet long with 750 feet of 24-inch steel pipe to 32 storage ponds with combined capacity of 5 acre-feet.	Former owners: Simon Darrach, Clair Engle, Pacific Gas and Electric Co. Supplemented by D-30N/1W-20U1.
D-4/N/24-25B1 13-21	Darrach Springs Fish Hatchery California Dept. Fish and Game	Darrach Creek	Fish Production Power Domestic	(*) -- (b)	Adjud.	(*)	(*)	1952	Gravity; concrete dam 3 feet high, 130 feet long with 750 feet of 24-inch steel pipe to junction with D-30N/1W-20Q1.	Supplements D-30N/1W-20Q1. Former owners, extent of use, and water rights details reported thereunder.
D-2/N/24-25C1 13-21	Gay S. Jefcoat	Springs tributary to North Fork Battle Creek	Irrig. Stock. Domestic	113 acres by flooding 250 head (b)	Riparian	--	--	Prior 1912	Gravity; earth and rock dam 2 feet high, 4 feet long with 0.75 mile of earth ditch.	Former owner: Henry Badger.
D-3/N/21-22G1 12-24	Blodgett Domestic Ditch Emory and Ruby Blodgett	North Fork Battle Creek	Irrig.	7 acres by flooding	Riparian	--	--	Prior 1900	Gravity; rock and wood dam 3 feet high, 30 feet long with a short earth ditch.	Former owners: J. LaTour, Null, C. Livingston, Ketchum.
D-3/N/26-28H1 12-23	Null-Armstrong Ditch Emory and Ruby Blodgett Eva Armstrong	North Fork Battle Creek	Irrig.	155 acres by flooding	Riparian	--	--	Prior 1900	Gravity; earth and rock dam 2 feet high, 15 feet long with a short earth ditch.	Former owners: J. Auburn, S. Stockwell.
D-3/N/21-22I2 12-24	Null Garden Ditch Emory and Ruby Blodgett	North Fork Battle Creek	Irrig.	37 acres by flooding	Riparian	--	--	Prior 1900	Gravity; earth and rock dam 2 feet high, 25 feet long with a short earth ditch.	Former owners: J. LaTour, Null, C. Livingston.
D-3/N/26-28J1 12-23	Farnsworth Ditch Jack Pine	North Fork Battle Creek	Irrig.	21 acres by flooding	Riparian	--	--	About 1880	Gravity; concrete and wood dam 2 feet high, 12 feet long with 0.25 mile of earth ditch.	Former owners: Long, Farnsworth. Previously irrigated an additional 9 acres.
D-3/N/26-28K1 12-23	Jack Pine	Bridges Creek	Irrig.	35 acres by flooding*	Riparian	--	--	About 1880	--	Acreage shown received partial irrigation only.
D-3/N/21-24K1 12-24	Joe Nunes, Julia Nunes, Minnie Nunes	Deer Creek	Irrig.	23 acres by flooding	Approp.	--	--	Prior 1900	Gravity; earth and wood dam 1 foot high, 8 feet long with 0.5 mile of earth ditch.	

* See remarks.

For reference to notes, see last page of file.

TABLE 2 (continued)
DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use	Type	Amount				Reference ^a
BATTLE CREEK SUBUNIT (Continued)										
MDRM	D-31N/2E-14W1 12-21	Joe Nunes, Julia Nunes, Minnie Nunes	Irrig. Domestic	11 acres by flooding 8 connections	Riparian	--	--	Prior 1946	Gravity, direct diversion to wood flume with 0.25 mile of earth ditch.	
	D-31N/2E-24W1 12-21	Fred Hootman	Irrig.	15 acres by sub-irrigation	Riparian	--	--	Prior 1906	Gravity, earth, rock, and wood dam 1.5 feet high, 15 feet long with a short earth ditch.	Former owners Taylor, Red River Lumber Co., Eastman.
	D-31N/2E-24W1 12-21	Frank Scharsch, et al. ⁶	Irrig.	78 acres by flooding	Riparian	--	--	Prior 1914	Gravity, concrete and wood dam 2 feet high, 30 feet long with 0.75 mile of earth ditch.	Former owner Taylor.
	D-31N/2E-24W2 12-23	Frank Scharsch, et al. ⁶	Irrig.	126 acres by flooding	Riparian	--	--	Prior 1944	Gravity, earth and rock dam 1 foot high, 8 feet long with a short earth ditch.	Former owner Taylor.
	D-31N/2E-24W1 12-23	Frank Scharsch, et al. ⁶	Irrig.	7 acres by flooding	Riparian	--	--	Prior 1904	Gravity, earth and rock dam 1 foot high, 8 feet long with a short earth ditch.	Former owner Taylor.
	D-31N/2E-26W1 12-23	Fred Hootman	Irrig.	76 acres by flooding	Riparian	--	--	1937	Gravity, earth and wood dam 2 feet high, 50 feet long with 0.25 mile of earth ditch.	
	D-31N/2E-26W1 12-23	Boyd Armstrong	Irrig.	28 acres by flooding	Riparian	--	--	Prior 1925	Gravity, concrete and wood dam 4 feet high, 15 feet long with a short earth ditch.	Former owners C. Eastman, C. Kimball.
	D-31N/2E-26W2 12-23	Boyd Armstrong	Irrig.	4 acres by flooding	Riparian	--	--	Prior 1925	Gravity, concrete and wood dam 4 feet high, 15 feet long with a short earth ditch.	Former owners C. Eastman, C. Kimball.
	D-31N/2E-27W1 12-23	Boyd Armstrong	Irrig.	4 acres by flooding	Riparian	--	--	Prior 1925	Gravity, concrete and wood dam 4 feet high, 15 feet long with a short earth ditch.	Former owners C. Eastman, C. Kimball.
	D-31N/2E-27W1 12-23	Earl Bibbens	Irrig. Stock.	13 acres by flooding (*)	Riparian	--	--	1888	Gravity, wood dam 1 foot high, 6 feet long with 1.5 mile of earth ditch.	Remarks for D-31N/2E-26W1 apply.
D-31N/2E-27W1 12-23	Earl Bibbens	Irrig. Stock.	10 acres by flooding (*)	Riparian	--	--	1888	Gravity, earth and rock dam 1 foot high, 11 feet long with 1.5 mile of earth ditch.	Remarks for D-31N/2E-26W1 apply.	
D-31N/2E-27W1 12-23	Loomis Ditch Richard Corradetti, C. V. Hall	Irrig. Power Domestic Stock.	144 acres by flooding 15 KW 8 connections 35 head	Approp.	2, 0.0 MI	Ex. 2, Page 176	1947	Gravity, concrete dam with 1.25 miles of earth ditch and 24 feet of 24-inch penstock.	Former owners E. F. Lewis, Charles Norman.	

^a See remarks column for lettered footnotes, see last page of table

TABLE 2 (continued)

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Overseer name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
BATTLE CREEK SUBUNIT (Continued)										
D-31N/3E-32B1 13-23	Earl Ribbens	Bailey Creek	Irrig. Stock.	24 acres by flooding 30 head*	Riparian	--	--	1888	Gravity; earth and rock dam 1 foot high, 10 feet long with 0.5 mile of earth ditch.	Former owner: Hugh Addington. These stock water also at D-31N/3E-29N1 and -29Q1.
D-31N/4E-17P1 12-24	United States Lassen Volcanic National Park	Manzanita Creek	Recr. Domestic	48 connections (b)	(c)	--	--	1958	Gravity; concrete dam 3 feet high, 25 feet long with 500 feet of 6-inch pipe.	
D-32N/2E-36L1 12-23	Huester Ditch Eva L. Armstrong	North Fork Battle Creek	Irrig. Stock.	46 acres by flooding 100 head	Approp.	--	--	Prior 1900	Gravity; earth and wood dam 2 feet high, 25 feet long with 1.4 mile of earth ditch.	Former owner: Silas Stockwell.
BUTTE CREEK SUBUNIT										
D-21N/3E-1A1 19-24	A. M. and R. E. Blum	Dry Creek	Irrig. Stock.	6 acres by flooding 35 head	Riparian	--	--	Prior 1870	Gravity; wood dam 3 feet high, 10 feet long with 0.2 mile of earth ditch.	Former owner: R. Lyte.
J-21N/3E-1A2 19-24	Gummers Ditch* Cedar Hills Mining and Mfg. Co.	Dry Creek	Irrig. Mining Stock. Domestic	27 acres by flooding -- 35 head (b)	Approp.	--	--	Prior 1860	Gravity; wood dam, 15 feet long with 0.25 mile of earth ditch and 50 feet of 6-inch steel pipe.	Former owners: Campbell, Williams, Johnson, Gaumer. Ownership changed to S. K. Hushing after 1962.
D-21N/3E-1B1 19-24	A. M. and R. E. Blum	West Branch Dry Creek	Irrig. Stock.	2 acres by flooding 15 head	Riparian	--	--	1860	Gravity; rock dam 1.5 feet high, 20 feet long with 0.3 mile of earth ditch.	Former owners: Frydt, Ed Blum.
D-21N/3E-2G1 19-24	Bethard Ditch R. W. and V. J. Stewart	Clear Creek	Irrig. Stock. Domestic	9 acres by flooding 50 head (b)	(c)	--	--	1915	Gravity; rock and wood dam 2 feet high, 15 feet long with 0.2 mile of earth ditch.	Former owner: F. M. Bethard, J. R. Maynas.
D-21N/3E-12J1 19-24	Charles L. Cooke	Springs tributary to Dry Creek	Irrig. Stock.	8 acres by sprinkler 30 head	Riparian	--	--	Prior 1900	Gravity; earth dam 12 feet high, 110 feet long with 850 feet of 4-inch steel pipe.	Former owner: George Phillips.
D-21N/3E-12K1 19-24	Charles L. Cooke	Dry Creek	Irrig. Stock.	11 head (*)	Riparian	--	--	Prior 1900	Pump; 4-hp gasoline engine with short 4-inch pipeline.	Former owner: George Phillips. Previously irrigated 5 acres by flooding.
D-21N/4E-6F1 (Imp. rt.) 19-24	Hal Dawson	West Branch Feather River*	Irrig. Domestic Stock.	2 acres by sprinkler* (b) 8 head	Approp.	--	--	About 1900	Gravity; 600 feet of 2-inch steel pipe.*	Diversion location number describes point of entry into unit from Feather River Hydrographic Unit. This diversion is further described in Bulletin 94-17, "Land and Water Use in Feather River Hydrographic Unit", to be released in early 1966. Previously irrigated an additional 2 acres.

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference				
BUTTE CREEK SUBUNIT (Continued)											
D-22N/3E-2P1 16-23	C. E. Anderson	Springs tributary to Butte Creek	Irrig. Stock. Domestic	4 acres by sprinkler by head (b)	(c)	--	--	1964	Gravity, earth dam 3 feet high, 47 feet long with reservoir and 300 feet of 3 1/2-inch steel pipe.	Former owner: Ray Harris, Jr.	
D-22N/3E-2P1 16-23	Thos. Dittor H. K. Evers	Little Butte Creek	Irrig. Domestic	18 acres by flooding (b)	Adjud.	1.1 cfs 1.1 cfs*	Schedule "d"	Prior 1960	Gravity, rock and wood dam 2 feet high, 45 feet long with 2 1/2 miles of earth and concrete ditch.	Former owners: T. J. Miners, T. J. Miners, T. J. Miners.	
D-22N/3E-2P1 16-23	J. W. Field, M.D.	Springs tributary to Butte Creek	Irrig.	2 acres by flooding	Riparian	--	--	About 1934	Gravity, earth and rock dam 1 foot high, 5 feet long with a short earth ditch.	Former owners: Coleman, Jr.	
D-22N/3E-2P1 16-23	E. H. and Ruth Statham, et al.	Little Butte Creek	Irrig.	13 acres by flooding (b)	Adjud.	4. cfs*	Schedule "d"	Prior 1900	Gravity, concrete and rock dam 5 feet high, 40 feet long with 0.5 mile of 18-inch concrete pipe and 1.5 miles of earth ditch.	Former owners: Burke, Warren Clark, Statham Family.	
D-22N/3E-2P1 16-23	D. C. McEnespy	Honey Run Creek	Irrig. Stock.	13 acres by flooding (b)	Adjud.	1.1 cfs*	Par. "d"	1964	Gravity, concrete and rock dam 2 feet high, 6 feet long with short flume and 1.2 mile of earth ditch.	Former owners: Hix, Dr. Head, Franz and John Hix, F. M. McEnespy. Water right appears to D-22N/3E-2P2 also.	
D-22N/3E-2P2 16-23	D. C. McEnespy	Honey Run Creek	Irrig.	7 acres by flooding (b)	Adjud.	(*)	(*)	About 1962	Gravity, rock and sheet metal dam 2 feet high, 6 feet long with 1/2 mile of earth ditch.	Remarks for D-22N/3E-2P1 apply.	
D-22N/3E-2P3 16-24	Elmer E. Humphry	Clear Creek	Irrig.	(*)	Approp.*	0.2 cfs	A-11	1967	Gravity, earth dam 11 feet high, 20 feet long with 1 1/2 miles of 8-inch steel pipe, 1 1/4 mile of earth ditch and 1/2 mile of 12-inch pipe.	Former owners: A. Burns, Parsons. Previously irrigated 1/2 acres. Not used in year of survey. Water right revoked 1967.	
D-22N/3E-2P3 16-24	Paradise Recreation and Park District	Berry Creek	Recr.	Fish pond	Approp.	0.2 cfs	A-17-0	1967	Gravity and storage; concrete dam 3 feet high, 4 feet long with 1 1/2 miles of earth ditch.	Former owners: St. exwatering, and water right details, see D-22N/3E-2P2.	
D-22N/3E-2P3 17-24	L. B. and R. A. Vandegrift	Little Butte Creek	Irrig. Stock.	13 acres by flooding (*)	Adjud.	(*)	(*)	1864	Gravity, concrete and wood dam 6 feet high, 3 feet long with 1/2 mile of earth ditch.	Former owners: Pacific Gas and Electric Co., Richardson and Preston, S. A. Vandegrift. Twelve acres of grant when receive supplemental supply from D-22N/3E-2P1 and -11A1. These stock water also at D-22N/3E-2P1, -11A1 and -11A2. This water right applies to D-22N/3E-2P1 also.	
D-22N/3E-2P3 17-24	L. B. and R. A. Vandegrift	Little Butte Creek	Irrig. Stock.	20 acres by flooding (*)	Adjud.	1.1 cfs*	Schedule "d"	1864	Gravity, stone dam as E-2N/3E-2P1, with 1 mile of earth ditch.		

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a			
BUTTE CREEK SUBUNIT (Continued)										
<u>MODAM</u> D-23W/3E-2K1 17-24	L. B. and R. A. Vandegrift	Hupp Spring	Irrig. Stock.	(*) (*)	Adjud.	1.00 cfs ⁿ	Par. 57 ^d	1860	Gravity; earth and wood dam 1 foot high, 4 feet long with 100 feet of earth ditch.	Supplements D-23W/3E-2H2. Extent of use reported thereunder.
D-23W/3E-1J1A1 18-24	L. B. and R. A. Vandegrift	Spring tributary to Little Butte Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1900	Gravity; direct diversion to earth ditch 600 feet long.	Supplements D-23W/3E-2H2. Extent of use reported thereunder.
D-23W/3E-1J1A1 18-24	J. Whitlow	Spring tributary to Little Butte Creek	Domestic	10 connections	Riparian	--	--	Prior 1951	Pump; 5-hp electric motor with 1-inch steel pipeline and concrete sump.	
D-23W/3E-2J1R1 18-24	Mazalia Reservoir Paradise Irrigation District	Little Butte Creek	Irrig. Domestic	423 acres* 4,548 connections*	Approp. Adjud.	3,200 cfs ^a 8,000 cfs ^p	A-476 Schedule 5 ^d	Prior 1920	Storage; earth and rock dam 45 feet high, 660 feet long with 42-inch steel pipe and 3,540-acre-foot reservoir.	Supplemented by Paradise Reservoir D-23W/4E-1J8L1. Previously irrigated an additional 9 acres.
D-23W/4E-1J8L1 18-24	Paradise Reservoir Paradise Irrigation District	Little Butte Creek	Irrig. Domestic	(*) (*)	Approp.	6,300 cfs ^a	A-476	1916	Storage; earth and rock dam 145 feet high, 600 feet long with natural stream channel as conduit and 6,430-acre-foot reservoir.	Supplements Mazalia Reservoir D-23W/3E-2J1R1. Extent of use reported thereunder.
D-24W/3E-2K1 17-24	Diamond National Corp.	Little Butte Creek	Irrig. Domestic	2 acres by flooding (b)	Riparian	--	--	Prior 1900	Gravity; concrete dam 2.5 feet high, 10 feet long with 600 feet of earth ditch and 600 feet of 12-inch steel pipe.	Former owner: Crew.
D-24W/3E-3G1 17-24	L. H. Duensing	Little Butte Creek	Irrig. Stock.	(*) (*)	Adjud.	0.25 cfs ⁿ 0.25 cfs ^p	Schedule 5 ^d	Prior 1900	Gravity; direct diversion to 750 feet of earth ditch.	Former owner: Duensing. Supplements D-24W/3E-3G1. Extent of use reported thereunder.
D-24W/3E-12F1 17-24	L. H. Duensing	Tributary to Little Butte Creek	Irrig. Stock.	11 acres by flooding* 40 head*	Riparian	--	--	Prior 1900	Gravity; wood dam 3 feet high, 8 feet long with 600 feet of earth ditch.	Former owner: Duensing. Supplemented by D-24W/3E-3G1.
D-26W/4E-12F1 16-25	Kennedy Pipe Mrs. Roy C. Anderson	Spring tributary to Willow Creek	Irrig. Domestic	21 acres by flooding 100 head (b)	Adjud.	0.30 cfs ⁿ 0.55 cfs ^p	Schedule 6 ^d	Prior 1900	Gravity; direct diversion to short 6-inch pipeline.	Former owners: Lucas and Bohlander.
D-26W/4E-13A1 16-25	Mrs. Jean Mickey Suman, et al. ^a	Jones Creek	Irrig. Domestic	11 acres by flooding 6 connections 4 to 8 horses	Adjud.	2.25 cfs ⁿ 2.25 cfs ^p	Schedule 6 ^d	Prior 1900	Gravity; log dam with short earth ditch.	Former owners: F. K. Mickey and J. H. Mindermann. Three cfs of right may be used at D-26W/4E-13B1.
D-26W/4E-13B1 16-25	Mickey-Mindermann Ditch, Mrs. Jean Mickey Suman ^a	Jones Creek	Irrig. Stock.	18 acres by flooding 4 to 8 horses	Adjud.	(*)	(*)	Prior 1900	Gravity; rock dam with 200 feet of earth ditch.	Remarks for D-26W/4E-13A1 apply.
D-24W/4E-13D-16-25	Lucas-Jones Diversion John H. Smith, et al. ^a	Willow Creek	Irrig. Stock.	19 acres by flooding 100 head	Adjud.	0.20 cfs ⁿ 0.50 cfs ^p	Schedule 6 ^d	Prior 1907	Gravity; rock dam with 8 feet of 6-inch pipe and 600 feet of earth ditch.	Former owners: J. H. Lucas, Bruce Colby.

^a See records on file.^b Lettered numbers, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a			
BUTTE CREEK SUBUNIT (Continued)										
D-26N/4E-21J1 16-24 MDBM	Mrs. Clara M. Lucas Alice J. Bagley	Spring tributary to Butte Creek	Irrig. Domestic	63 acres by flooding* (b)	Adjud.	*.n 0.47 cfs *.p 1.40 cfs	Schedule 6 ^d Schedule 6 ⁿ Schedule 6 ^p	About 1860	Gravity, direct diversion to 0.4 mile of earth ditch.	Former owners: Paul and Ellen Lucas, G. W. and J. H. Lucas. Irrigation use is supplemented by D-26N/4E-21J2, -21J3, -21J4, and -26B1. Water right applies also to D-26N/4E-21J2, -21J3, -21J4, and -26B1. Supplements D-26N/4E-21J1. Former owners, extent of use, and water right details reported thereunder.
D-26N/4E-21J2 16-24	Mrs. Clara M. Lucas Alice J. Bagley	Spring tributary to Butte Creek	Irrig. Domestic	(*) (b)	Adjud.	(*)	(*)	About 1860	Gravity, direct diversion to 120 feet of earth ditch.	Supplements D-26N/4E-21J1. Former owners, extent of use, and water right details reported thereunder.
D-26N/4E-21J3 16-24	McGunn Estate ^g	Butte Creek	Domestic	53 connections	Adjud.	0.50 cfs ⁿ 0.25 cfs ⁿ 0.10 cfs ^p	Schedule 6 ^d Schedule 6 ⁿ Schedule 6 ^p	Prior 1862	Gravity: rock and wood dam 1 foot high, 40 feet long with 0.5 mile of earth ditch.	Supplements D-26N/4E-21J1 for use reported thereunder. Water right details reported under this diversion and under D-26N/4E-21J1 also apply to D-26N/4E-21J2 and -28B1.
D-26N/4E-21J4 16-24	Mrs. Clara M. Lucas Alice J. Bagley	Spring tributary to Butte Creek	Irrig. Domestic	(*) (b)	Adjud.	*.n 0.20 cfs *.p 0.80 cfs	Schedule 6 ^d Schedule 6 ⁿ Schedule 6 ^p	About 1860	Gravity, direct diversion to 70 feet of earth ditch.	Supplements D-26N/4E-21J1 for use reported thereunder. Water right details reported under this diversion and under D-26N/4E-21J1 also apply to D-26N/4E-21J2 and -28B1.
D-26N/4E-21J2 16-24	Mrs. Clara M. Lucas Alice J. Bagley	Spring tributary to Butte Creek	Irrig. Domestic	(*) (b)	Adjud.	(*)	(*)	About 1860	Gravity, direct diversion to 375 feet of earth ditch.	Supplements D-26N/4E-21J1 for use reported thereunder. Water right details reported under D-26N/4E-21J1 and -21J4 apply.
D-26N/4E-21B1 16-24	Mrs. Clara M. Lucas Alice J. Bagley	Spring tributary to Butte Creek	Irrig. Domestic	(*) (b)	Adjud.	(*)	(*)	About 1860	Gravity, direct diversion to short earth ditch.	Remarks for D-26N/4E-21J2 apply.
D-26N/4E-22D1 16-24	Mrs. Clara M. Lucas Alice J. Bagley	Butte Creek	Irrig. Stock, Domestic	4 acres by flooding -- (b)	Adjud.	0.20 cfs ⁿ 0.50 cfs ^p	Schedule 6 ^d Schedule 6 ^p	About 1860	Gravity: rock and wood dam 1 foot high, 50 feet long with 0.8 mile of earth ditch.	Former owners: Paul and Ellen Lucas, G. W. and J. H. Lucas.
D-26N/4E-28B1 16-24	McGunn Estate ^g	Spring tributary to Butte Creek	Irrig.	(*)	Adjud.	(*)	(*)	Prior 1862	Gravity, direct diversion to short earth ditch.	Former owners: Lizzy T. Tussick, William T. McGunn, McGunn. Supplements D-26N/4E-21J1. Extent of use reported thereunder. Water right details reported under D-26N/4E-21J1 and -21J4 apply.
D-26N/4E-28B1 16-24	Roper Ditch John Cussick Estate	Butte Creek	Domestic	6 connections* (b)	Adjud.	0.50 cfs ⁿ 0.25 cfs ⁿ 0.25 cfs ^p	Schedule 6 ^d Schedule 6 ⁿ Schedule 6 ^p	Prior 1846	Gravity: direct diversion to 1 mile of earth ditch.	Supplemented by D-26N/4E-21J1. Water right of 0.50 cfs for nonconsumptive use only.
D-26N/4E-24H1 16-24	John Cussick Estate	Spring tributary to Butte Creek	Domestic	(*)	Approp.	--	--	Prior 1846	Gravity: concrete lining on spring with short earth ditch.	Supplements D-26N/4E-28B1, for use reported thereunder.
CAMPBELL MOUND SUBUNIT										
(No diversions located in this subunit)										

^a See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of approval or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
CHICO CREEK SUBUNIT										
D-22N/2E-22K1 (Partial Export) 19-23	Fred Rabo Steve Welton	Little Chico Creek	Irrig. Stock. Export*	16 acres by flooding 900 head (a)	Approp.	--	--	1876	Gravity; concrete and rock dam 6 feet high, 50 feet long with 1.5 miles of earth ditch.	Partial export to Sacramento Valley Floor Hydrographic Unit. Former owners: Crouch, Moak, Baker.
D-22W/2E-2J1 17-23	John F. Henning	Spring tributary to Big Chico Creek	Irrig. Stock. Domestic	11 acres 20 head (b)	Approp.	--	--	1880	Gravity; direct diversion to 0.25 mile of 2-1/2-inch iron pipe.	Former owner: Mickey Ranch.
D-23N/2E-17Q1 18-22	Bob Richardson Ned Richardson	Iron Canyon Spring	Domestic	53 connections	Riparian	--	--	Prior 1930	Gravity; direct diversion to 2-inch pipe with storage tank.	
D-23N/2E-21D1 18-22	Bob Richardson Ned Richardson	East Branch Mud Creek	Irrig. Stock.	30 head (c)	Riparian	--	--	Prior 1930	Gravity; direct diversion to 18-inch iron pipe.	Irrigation use for 6 acres of numerous lawns.
D-23N/3E-5D1 17-23	Dr. Robert N. Erickson	Spring tributary to Little Chico Creek*	Irrig. Domestic	2 acres by sprinkler* 14 connections	Approp.	4,500 gpd A-16760 7,500 gpd A-7818		1879	Gravity; concrete enclosure 3 feet wide, 6 feet long with 50 feet of 1-1/2-inch plastic pipe.	Former owner: Sheffton. Supplemented by ground water.
D-23W/3E-31C1 18-23	C. H. Kinne	Tributary to Little Chico Creek	Irrig. Stock.	8 head (d)	Prescriptive	--	--	Prior 1946	Gravity; direct diversion to 600 feet of earth ditch.	Former owners: N. Anchor, Christensen, Mrs. Tom German. Previously irrigated 7 acres.
D-24W/2E-14Q1 17-23	Donald Sorensen	Tributary to Mud Creek	Irrig. Fire protection	(e)	Riparian	--	--	Prior 1962	Gravity and storage; concrete and rock dam 4 feet high, 15 feet long with 2 miles of 4-inch plastic pipe and storage reservoirs.	Previously irrigated 4 acres.
D-24W/3E-27K1 17-23	John F. Henning	Tributary to Big Chico Creek	Irrig. Stock.	14 acres by flooding 25 head*	Approp.	1 cfs A-17525		1883	Gravity; rock dam 1 foot high, 6 feet long with a total of 0.5 mile of earth ditch and flume.	Former owner: Mickey Ranch. These stock water also at D-24N/2E-30B1.
D-24W/2E-44B 17-23	John F. Henning	Tributary to Big Chico Creek	Irrig. Stock.	6 acres by flooding* (e)	Approp.	(e)	(*)	1883	Gravity; rock and earth dam 2 feet high, 6 feet wide with a total of 600 feet of pipe and earth ditch.	Former owner: Mickey Ranch. Waters same stock as D-24N/2E-27Q1. Extent of use and water right data are reported thereunder. Previously irrigated an additional 4 acres.
D-24W/2E-44B 17-23	John F. Henning	Big Chico Creek	Irrig. Stock.	20 acres 20 head	Riparian	--	--	1957	Gravity; rock dam with 1.25 miles of earth ditch.	Former owner: Mickey Ranch.
D-26N/4E-2 F1 16-24	Diamond National Corp.	Tributary to Big Chico Creek	Recr.	1,200 - 1,400 persons*	Riparian	--	--	1934	Gravity; concrete and rock dam 3 feet high, 25 feet long with 0.25 mile of 10-inch pipe to 3-hp pump and 2-inch pipe to storage tank.	Supplemented by D-26N/4E-20M1.

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and figure number	Diversion name and/or owner	Source	Water use in 1962			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference				
CHICO CREEK SUBUNIT (Continued)											
MEBKM D-26N/4E-20W/1E-34-1	Diamond National Corp.	Big Chico Creek	Beef.	(*)	(c)	--	--	1934 1870	Storage, earth dam 12 feet high, 300 feet wide with storage reservoir of 1.5-acre surface area.	Supplements D-26N/4E-20W/1E-34-1 for use reported thereunder	
			COW CREEK SUBUNIT								
D-30N/4E-20W/1E-34-1	Dr. Cy and Ruby Elzgett	Ash Creek	Irrig.	14 acres by flooding	Riparian	--	--	About 1870	Gravity; earth dam 4 feet high, 12 feet long with a 4-inch pipe and short earth ditch.	Former owners: T. B. Armstrong, J. M. Bull.	
D-31N/4E-20W/1E-34-1	Maxine T. Williams ^m	North Fork Bear Creek	Irrig.	16 acres*	Riparian	--	--	Prior 1950	Gravity, movable dam 3 feet high, 10 feet wide with 2 miles of earth ditch.	Former owner: John R. Shuford. Supplements D-31N/4E-20W/1E-34-1 for additional use reported thereunder. Previously irrigated an additional 5 acres.	
D-31N/4E-20W/1E-34-1	Maxine T. Williams ^m	Tributary to North Fork Bear Creek	Irrig. Stock.	1 acre by flooding 60 - 70 head*	Riparian	--	--	Prior 1952	Gravity; earth dam 1 1/2 inches high, 2 feet long with an earth ditch.	Former owner: John R. Shuford. Same stock as D-31N/4E-20W/1E-34-1.	
D-31N/4E-20W/1E-34-1	Maxine T. Williams ^m	Tributary to North Fork Bear Creek	Irrig. Stock	7 acres* 1.0 head*	Riparian	--	--	1955	Gravity, 2-foot square box 1 foot high with 4-inch aluminum pipe.	Former owners: Aldridge, John R. Shuford. Previously irrigated an additional 1 1/2 acres. Waters same stock as D-31N/4E-20W/1E-34-1.	
D-31N/4E-20W/1E-34-1	Maxine T. Williams ^m	Tributary to North Fork Bear Creek	Irrig. Stock. Domestic Power	12 acres* (*) (b) 210 Kw*	Riparian	--	--	1939	Gravity, direct diversion with 20 feet of earth ditch to junction with D-31N/4E-20W/1E-34-1 and -592. Water then enters 2 1/2-inch plastic pipes each 100 feet long to 150-gallon steel tank and 0.7 mile of 2-inch steel pipe.	Former owner: John R. Shuford. Previously irrigated an additional 1 1/2 acres. Supplemented by D-31N/4E-20W/1E-34-1. Waters same stock reported under D-31N/4E-20W/1E-34-1.	
D-31N/4E-20W/1E-34-1	Maxine T. Williams ^m	Tributary to North Fork Bear Creek	Irrig. Stock.	1 acre by flooding (*)	Riparian	--	--	Prior 1952	Gravity; direct diversion to 20 feet of earth ditch.	Former owner: John R. Shuford. Same stock reported under D-31N/4E-20W/1E-34-1.	
D-31N/4E-20W/1E-34-1	Maxine T. Williams ^m	Spring tributary to North Fork Bear Creek	Irrig. Stock. Domestic Power	(*) (*) (*)	Riparian	--	--	1934	Gravity; earth dam 1 1/2 inches high, 6 feet long with 100 feet of earth ditch to junction with D-31N/4E-20W/1E-34-1 and -592.	Former owner: John R. Shuford. Supplements D-31N/4E-20W/1E-34-1 for uses reported thereunder. Waters same stock reported under D-31N/4E-20W/1E-34-1.	

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and figure number	Diversion name and/or owner	Source	Water use in 1962			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a				
COW CREEK SUBUNIT (Continued)											
MDR&M D-31N/1E-202 12-21	Maxine T. Williams ^m	Spring tributary to North Fork Bear Creek	Irrig. Stock. Domestic Power	(*) (*) (*) (*)	Riparian	--	--	1939	Gravity; direct diversion to short earth ditch and junction with D-31N/1E-581 and -591.	Former owner: John R. Shuford. Supplements D-31N/1E-581 for uses reported thereunder. Waters same stock reported under D-31N/1E-581.	
D-31N/1E-14W1 12-22	Allen's Reserve for M. V. and M. P. Allen	South Fork Bear Creek	Stock.	30 head	Approp. Approp.	4.0 afa 6.3 afa	A-17522 A-21177	1952	Storage; earth and rock dam 13 feet high, 300 feet long with small storage reservoir.		
D-31N/1E-15U1 12-22	N. V. and M. B. Allen	Spring tributary to South Fork Bear Creek	Irrig. Stock. Domestic	23 acres by flooding* 30 head* 8 connections*	Riparian	--	--	Prior 1941	Gravity; earth dam 3 feet high, 150 feet long with 300 feet of earth ditch.	Former owner: Cleland. Supplemented by D-31N/1E-15R1.	
D-31N/1E-11R1 12-22	M. V. and M. B. Allen	Spring tributary to South Fork Bear Creek	Irrig. Stock. Domestic Fish culture	(*) (*) (*) --	Riparian	--	--	1886	Gravity; 6-foot square and 6-inch high concrete enclosed spring with 2-inch steel pipe and 100 feet of earth ditch to 0.3-acre surface area pond.	Former owner: Cleland. Supplements D-31N/1E-15U1 for uses reported thereunder.	
D-31N/1E-11A1 12-21	M. B. Aldridge	Snow Creek	Irrig.	6 acres by flooding	Riparian	--	--	Prior 1882	Gravity; concrete dam 8 feet high, 25 feet wide with 1 mile of earth ditch.	Former owner: McCoy	
D-31N/1E-21Q1 12-21	Charles Brovan	South Fork Bear Creek	Irrig.	10 acres by flooding	Riparian	--	--	1877	Gravity; rock dam with 500 feet of earth ditch.	Former owner: H. M. Witherow.	
D-31N/1E-21M1 12-22	Charles Brovan	Little Buckskin Creek	Irrig. Power	25 acres by flooding and sprinkler 25 KW	Riparian	--	--	1877	Gravity and storage; concrete dam 4 feet high, 24 feet wide with 0.75 mile of 1-inch pipe and 0.25 mile of earth ditch.	Former owner: H. N. Witherow.	
D-31N/1E-21M1 12-21	G. E. Truett ⁿ and Sons	Big Buckskin Creek	Irrig.	212 acres	Deeded	--	--	Prior 1900	Gravity; direct diversion to concrete culvert with 0.8 mile of earth ditch.	Former owner: Thatcher. Ownership sold to Dr. Charles Miller after 1962.	
D-31N/1E-31Q1 12-21	Ross Edwards	South Fork Bear Creek	Irrig.	56 acres by flooding	Riparian	--	--	Prior 1900	Gravity; rock dam 1.5 feet high, 6 feet long with 0.4 mile of earth ditch.	Former owner: Albery	
D-31N/1E-31Q2 12-21	H. P. Lovellett	South Fork Bear Creek	Irrig.	12 acres by flooding*	Riparian	--	--	1950	Gravity; rock dam 1 foot high, 5 feet long with an earth ditch.	Previously irrigated an additional 9 acres.	
D-31N/1E-31R1 12-21	Moore Estate	South Fork Bear Creek	Irrig.	17 acres by flooding	Approp.	--	--	Prior 1911	Gravity; rock dam 2 feet high, 10 feet long with metal and wood flumes and 2.4 miles of earth ditch.		

^a See remarks column.
For further details, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Diversion name and/or owner	Source	Water use in 1962		Type	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Amount	Reference ^a			
COW CREEK SUBUNIT (Continued)										
D-31N/2E-3E1 12-23	Wallace A. Thatcher	Springs tributary to South Fork Bear Creek	Irrig. Stock.	4 1/2 acres 100 head*	Riparian	--	--	1901	Gravity, direct diversion to earth ditch.	These stock water also at D-31N/2E-3E2, -4E1, -4C1, and -4J1.
D-31N/2E-3E1 12-23	Wallace A. Thatcher	Springs tributary to South Fork Bear Creek	Irrig. Stock. Domestic	7 acres (*) (b)	Riparian	--	--	1901	Gravity, direct diversion to earth ditch.	Waters same stock reported under D-31N/2E-3E1.
D-31N/2E-4B1 12-22	Chase Mill Ditch Wallace A. Thatcher	Tributary to South Fork Bear Creek	Irrig. Stock.	7 1/2 acres* (*)	Riparian	--	--	Prior 1901	Gravity; earth and rock dam 2 feet high, 2 1/2 feet wide with earth ditch.	Supplemented by ground water. Waters same stock reported under D-31N/2E-3E1.
D-31N/2E-4C1 12-22	Wallace A. Thatcher	Tributary to South Fork Bear Creek	Irrig. Stock.	4 1/2 acres (*)	Riparian	--	--	1908	Gravity; concrete dam 15 feet high, 20 feet long with earth ditch.	Waters same stock reported under D-31N/2E-3E1.
D-31N/2E-4J1 12-23	Wallace A. Thatcher	South Fork Bear Creek	Stock.	(*)	(c)	--	--	About 1904	Storage; earth dam 1 1/2 feet high, 200 feet long with storage reservoir.	Waters same stock reported under D-31N/2E-3E1.
D-31N/1W-6N1 12-21	Abbott-Jones Ditch A. G. Abbott, et al.	South Cow Creek	Irrig. Stock.	333 acres --	Riparian	--	--	About 1912	Gravity; concrete dam 3 feet high, 75 feet long with an earth ditch.	Previously irrigated an additional 16 acres.
D-31N/1W-23H1 12-21	Sheridan Ditch Spence Murfey, et al.	South Fork Bear Creek	Irrig. Stock. Domestic	298 acres by flooding and sprinkler* 220 head 5 connections	Approp.	--	--	1861	Gravity; rock dam 1 foot high, 15 feet long with 0.75 mile of earth ditch and 0.25 mile of 16-inch pipe.	Previously irrigated an additional 16 acres.
D-31N/1W-23P1 12-21	Ernest M. Wengler	Springs tributary to Sheridan Creek	Irrig. Stock.	7 1/2 acres by flooding 50 head	Riparian	--	--	Prior 1912	Gravity; direct diversion to a series of earth spreader ditches.	Former owners: Martin Adams, Matt Wengler.
D-31N/1W-35C1 12-21	Herbert J. Johnson	Springs tributary to Shingle Creek	Irrig.	2 1/2 acres by sprinkler* (c)	(c)	--	--	1902	Storage and gravity; earth dam 20 feet high, 300 feet long with a 6-acre-foot reservoir and 0.3 mile of 8-inch pipe.	Former owner: Ogburn. Supplemented by D-31N/1W-35C2.
D-31N/1W-35C2 12-21	Herbert J. Johnson	Shingle Creek	Irrig.	(*) (c)	(c)	--	--	1904	Storage and gravity; earth dam 20 feet high, 250 feet long with a 1.5-acre-foot reservoir and 600 feet of 8-inch pipe.	Former owner: Ogburn. Supplemented by D-31N/1W-35C1. Extent of use reported thereunder.
D-31N/2W-4E1 12-20	John Crove	Basin Hollow Creek	Irrig. Stock.	62 acres 500 - 700 head	Riparian	--	--	Prior 1901	Gravity; earth dam 3 feet high, 200 feet long with an earth ditch.	Former owners: Dan Heryford, C. A. Huff, Crove.

^a See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount			
COW CREEK SUBUNIT (Continued)									
D-31N/24-6P1 12-19 (Partial Export)	Millville Ditch Millville Ditch Co.	Glover Creek	Irrig. Stock. Export ^a	160 acres* --	Adjud.	4.40 cfs ^d	Schedule 2 ^k	About 1870	Partial export to Sacramento Valley Floor Hydrographic Unit. Previously irrigated an additional 26 acres. Also irrigated 2 acres of cemetery.
D-31N/24-1UP2 12-20	M. N. Hunt Estate Co.	South Cow Creek	Irrig. Stock.	28 acres 40 head	Riparian	--	--	Prior 1900	Pump; 20-hp electric motor with 12-inch pipeline.
D-32N/1E-5K1 11-21	Le. H. Dargatz	Spring tributary to Glendenning Creek	Irrig. Stock. Domestic	15 acres* 6 head (b)	Riparian	--	--	Subsequent to 1947	Gravity; concrete tank with 2-inch steel pipeline and earth ditches.
D-32N/1E-7K1 11-21	L. B. Atkins	Spring tributary to Old Cow Creek	Irrig. Stock.	13 acres 50 head*	(c)	--	--	Prior 1900	Gravity and storage; direct diversion to earth ditch with 3-acre surface area reservoir.
D-32N/1E-7K2 11-21	L. B. Atkins	Spring tributary to Old Cow Creek	Irrig. Stock.	36 acres (*)	Riparian	--	--	Prior 1900	Gravity; direct diversion to earth ditch.
D-32N/1E-7K1 11-21	Brown and Grover Ditch L. B. Atkins, et al. ^{e,g}	Old Cow Creek	Irrig. Domestic	550 acres (b)	Riparian Decided	-- 500 MI	-- Pages 356 & 357 ^f	1888	Gravity; rocks and concrete in creek bed with 4 miles of earth ditch.
D-32N/1E-8K1 11-21	June M. Osbridge	Tributary to Old Cow Creek	Irrig. Stock.	19 acres 20 head	Approp. Approp.	0.61 cfs 1.00 cfs	A-8522 A-3256	1935 1963	Gravity and storage; dam 6 feet high, 150 feet long with small storage reservoir and earth ditch.
D-32N/1E-9K1 11-21	L. C. Neely	Glendenning Creek	Irrig.	14 acres by flooding	Approp.	--	Book 1 ^f	1900	Gravity; direct diversion to 1 mile of earth ditch.
D-32N/1E-10C1 11-22	Warren K. Grindly	Glendenning Creek	Irrig.	16 acres	Riparian	--	--	--	Gravity; rock dam with 0.7 mile of earth ditch.
D-32N/1E-13R1 12-22	Marian G. Hays*	Atkins Creek	Irrig. Power Stock.	24 acres by flooding 10 KW 9 ^h head	Approp.	--	--	1893	Gravity and storage; concrete dam 2 feet high, 32 feet long with 1 mile of earth ditch to 3-acre surface area reservoir.
D-32N/1E-15C1 12-22	Shasta Forests Co., Inc.	Tributary to Glendenning Creek	Irrig. Stock.	68 acres by flooding --	(c)	--	--	--	Gravity and storage; rubble dam 1 foot high, 5 feet long with 0.5 mile of earth ditch and 2-acre surface area reservoir.
D-32N/1E-17C1 11-21	L. C. Neely	Spring tributary to Glendenning Creek	Irrig. Stock.	9 acres 5 head	Riparian	--	--	Prior 1900	Gravity; direct diversion to earth ditch branching into several small ditches.
									Former owners: Snell, Effie Rhoades.

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of approval or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ¹			
COW CREEK SUBUNIT (Continued)										
D-32N/1E-17J1 11-21 MDHAM	L. C. Neely	Tributary to Old Cow Creek	Irrig. Stock.	16 acres 25 head	Approp.	--	--	1896	Gravity; wood dam 2 feet high, 20 feet long with 3.4 mile of earth ditch.	Former owners: Snell, Effie Rhoades.
D-32N/1E-23J1 12-22	German Ditch South Cow Creek Ditch Co.	South Cow Creek	Irrig. Stock. Domestic	251 acres* 20 head 14 connections	Approp.	--	Book 4 ^f	1887	Gravity; rock and wood dam 6 feet high, 150 feet long with 1.2 miles of concrete canal to 150 feet of wooden flume, a total of 4 miles of earth ditch and 2 miles of pipeline.	Previously irrigated an additional 31 acres.
D-32N/1E-24J1 12-22	Darrell Faber	Dickinson Creek	Irrig. Stock. Domestic	6 acres* (*) (b)	Deeded	--	--	Prior 1890	Gravity; earth dam 2 feet high, 20 feet long with 0.25 mile of earth ditch and a small storage reservoir.	Former owners: Edgar Firth, B. P. McCarty. Supplemented by D-32N 1E-26K1 and -26L1 for irrigation and -26K1 for stockwatering use. Previously irrigated an additional 5 acres.
D-32N/1E-26K1 12-22	Darrell Faber	Tributary to Dickinson Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1905	Gravity; temporary earth dam with 0.5 mile of earth ditch.	Former owners: Dickinson, Albert Hirsch. Supplements D-32N 1E-26J1. Extent of use reported thereunder.
D-32N/1E-26L1 12-22	Darrell Faber	Dickinson Creek	Irrig.	(*) (*)	Approp.	20 MI under 4-inch pressure	Page 111 ^f	Prior 1886	Gravity; earth dam 4 feet high, 12 feet long with an earth ditch.	Former owners: Albert Hirsch, Frank Lewis, Edgar Firth, B. P. McCarty. Supplements D-32N 1E-26J1. Extent of use reported thereunder.
D-32N/1E-27E1 12-22	Hagaman Gulch Diversion Mrs. Virginia Morelli	Hagaman Gulch	Irrig. Stock. Domestic	(*) (*) (*)	Riparian	--	--	1842	Gravity; earth and wood dam 1 foot high, 10 feet long with 1 mile of earth ditch.	Former owner: Carl Nelson. Supplements D-32N 2E-30L1. Extent of use reported thereunder.
D-32N/1E-28N1 12-21	Mrs. Virginia Morelli	South Cow Creek	Irrig. Stock.	47 acres 10 head	Riparian	--	--	About 1870	Gravity; rubble dam with an earth ditch.	Former owner: Peter Hufford. Previously irrigated an additional 1 acre. Twenty acres of amount shown received supplemental supply from D-32N 2E-30L1.
D-32N/2E-541 11-22	Hemi C. Knight Elmer Hufford	Atkins Creek	Irrig. Stock. Power Domestic	60 acres* 60 head 15 KW (b)	Approp.	--	--	1868	Gravity; rock dam 2 feet high, 10 feet long with 1 mile of earth ditch and 2-acre surface area reservoir.	Former owner: George Hufford. Supplements D-32N 2E-4A. Extent of use reported thereunder.
D-32N/2E-P01 11-22	Roni C. Knight Lezer Hufford	Atkins Creek	Irrig.	(*)	Riparian	--	--	Prior 1914	Gravity; movable rock dam with 0.1 mile of earth ditch.	Former owners: Henry Hagerman, H. W. Anderson, Albert Hirsch, C. C. Cameron. Previously irrigated an additional 24 acres jointly with D-32N 1E-27E1.
D-32N/2E-30J1 12-22	Eight-Mile Ditch Darrell Faber Mrs. Virginia Morelli	Beal Creek	Irrig. Stock. Domestic	31 acres* -- (b)*	Approp.	50 MI under 4-inch pressure. 50 MI under 4-inch water pressure	Page 4, Misc. 1 Reprints Page 128, water rights Book 1 ^f	1867	Gravity; wood dam 3 feet high, 1 foot long with 2 miles of earth ditch.	

* See references on p. 11.

Per lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and Figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a			
COW CREEK SUBUNIT (Continued)										
D-32N/2E-33E-12-22 NDRM	Shasta Forests Co., Inc.	Spring tributary to South Fork Bear Creek*	Irrig. Stock.	(*) (*)	Riparian	--	--	1948	Gravity; earth dam 3 feet high, 100 feet long with 300 feet of earth ditch.	Supplements D-32N/2E-33E-12-22. Extent of use reported thereunder. Supplemented by ground water.
D-32N/2E-33E-12-22	Wagner Flat Ditch Wallace A. Thatcher	Tributary to South Fork Bear Creek*	Irrig. Stock.	27 acres* 100 - 400 head*	Riparian	--	--	Prior 1905	Gravity; earth dam 3 feet high, 10 feet long with 0.5 mile of earth ditch.	Former owners: Baker, Derch, Taylor. Supplemented by D-32N/2E-33E-12-22. Supplemented also by ground water.
D-32N/2E-33E-12-22	Wallace A. Thatcher	Spring tributary to South Fork Bear Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1905	Gravity; direct diversion to 100 feet of earth ditch.	Supplements D-32N/2E-33E-12-22. Extent of use reported thereunder. Supplemented by ground water.
D-32N/2E-33E-12-23	Henry Taylor	Spring tributary to South Fork Bear Creek	Irrig. Stock. Domestic	45 acres 50 head (b)	Riparian	--	--	Prior 1920	Gravity; earth dam 1 foot high, 50 feet long with an earth ditch.	Former owners: McLain, Derch.
D-32N/4E-22E-11-21	Harper Ditch Joseph A. Gritsch	South Clover Creek	Stock.	40 head	Adjud.	0.25 cfs ^q	Schedule 2 ^b	Prior 1900	Gravity; rock and debris dam 1 foot high, 30 feet long with 0.5 mile of earth ditch to two small storage reservoirs.	Former owner: T. E. Foster. Ownership changed to Glen and Dorothy Pearson after 1962.
D-32N/4E-22E-11-21	Slaughter Pole Ditch Joseph A. Gritsch	Slaughter Pole Creek	Irrig. Stock.	19 acres	Adjud.	0.40 cfs ^q	Schedule 2 ^b	Prior 1925	Gravity; rock dam with 1 mile of earth ditch.	Former owner: T. E. Foster. Ownership changed to Glen and Dorothy Pearson after 1962.
D-32N/4E-22E-11-21	Rose Briar Ditch W. S. Bascom	Rose Briar Creek	Irrig. Stock.	30 - 50 head (*)	Adjud.	0.70 cfs ^q	Schedule 2 ^b	Prior 1930	Gravity; rock and sandbag dam 2 feet high, 20 feet long with 1 mile of earth ditch.	Former owner: Joe Rice Estate. Previously irrigated 16 acres by flooding.
D-32N/4E-11E-11-21	Hunt Ditch Joseph A. Gritsch	South Clover Creek	Irrig. Stock.	104 acres by flooding	Adjud.	0.40 cfs ^q	Schedule 2 ^b	Prior 1925	Gravity; rock dam with 1.4 mile of earth ditch to two 2-acre-foot reservoirs.	Former owner: T. E. Foster. Ownership changed to Glen and Dorothy Pearson after 1962.
D-32N/4E-15E-11-21	Reis Koehler	Old Cow Creek	Irrig. Stock.	26 acres 50 head	Riparian	--	--	Prior 1929	Gravity; rock dam with 0.7 mile of earth ditch.	
D-32N/4E-15E-12-21	H. E. Bague	Tributary to Old Cow Creek	Irrig. Stock. Domestic	26 acres 10 head (b)	Riparian	--	--	Prior 1940	Gravity; 2 dams 150 feet long, one 6 feet high and one 10 feet high with an earth ditch and two small reservoirs.	
D-32N/4E-16E-11-21	Atkins-Koehler Ditch J. Hufford, Sr., et al. ^a	Old Cow Creek	Irrig. Stock.	385 acres --	Riparian	--	--	About 1917	Gravity; concrete dam 2 feet high, 50 feet long with 2.6 miles of earth ditch.	J. Hufford, Sr., part owner, sold interests to Carter since 1962.
D-32N/4E-18E-11-21	Reineke Clover Ditch Luke Reineke Charles Taylor	Clover Creek	Irrig. Stock.	8 acres by flooding	Adjud.	1.40 cfs ^q	Schedule 2 ^b	Prior 1900	Gravity; rock dam 4 feet high, 40 feet long with 1 mile of earth ditch.	

^a See remarks on table.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and Figure number	Diversion name and/or owner	Source	Water use in 1962			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference				
COW CREEK SUBUNIT (Continued)											
D-32N/1A-2/E1 12-21 KOPBM	Basset Ditch John Crwe, et al. ⁸	Old Cow Creek	Irrig. Stock. Domestic	82.5 acres* 1,000 head* 6 connections	Riparian	--	--	--	About 1890	Gravity, concrete dam 6 feet high, 100 feet long with 3.4 miles of earth ditch and 2.1 miles of natural channel used as conduit.	Former owners: Heryford, Fisher Ranch, Joe Hunt. Previously irrigated an additional 52 acres. Portion of stock water also at D-32N/2W-2B1.
D-32N/1W-2/F1 12-21	D. N. and Marie Covey Dr. Paul Donahue	Meeker Springs	Irrig. Stock.	57 acres 100 head	Riparian	--	--	--	1914	Gravity, direct diversion to 0.25 mile of earth ditch.	
D-32N/1W-3/F1 12-21	Henry H. Hartman J. D. Staiger	South Cow Creek	Irrig. Stock.	56 acres 60 head	Riparian	--	--	--	Prior 1920	Gravity, wooden dam 3 feet high, 50 feet long with 1 mile of earth ditch.	Former owners: Gimlin, E. Clough, Hartman interests sold to Henry McLand after 1922.
D-32N/1W-3/F2 12-21	Elmer Hufford	South Cow Creek	Irrig. Stock.	133 acres 60 head	Riparian	--	--	--	1860	Gravity, rock and wooden dam 2 feet high, 50 feet long with 1 mile of earth ditch.	
D-32N/1W-3E1 12-21	Dean Lansing	South Cow Creek	Irrig. Stock.	164 acres* 200 head	Riparian	--	--	--	Prior 1900	Gravity and pump, concrete dam 3 feet high, 50 feet long with a 7.5-hp electric pump and an earth ditch.	Former owners: Moore, Rose Ranch, Wisbar Products, Inc. Supplemented by D-32N/1W-3E2. Previously irrigated an additional 13 acres.
D-32N/1W-3E2 12-21	Dean Lansing	South Cow Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	--	Prior 1900	Gravity, rubble dam with an earth ditch.	Supplements D-32N/1W-3E1. Extent of use reported thereunder.
D-32N/2W-2/E1 12-20	Harry L. Rutherford	Oak Run Creek	Irrig.	22 acres by sprinkler*	Riparian	--	--	--	1950	Pump, 20-hp electric motor with 0.5 mile of 5-inch pipe.	Former owners: Joe Middleton, John Hunt Previously irrigated an additional 20 acres.
D-32N/2W-2B1 12-20	John Crwe	Old Cow Creek	Irrig. Stock.	164 acres 600 head*	Riparian	--	--	--	Prior 1900	Gravity, rock, plastic, and wooden dam with 0.6 mile of earth ditch.	Former owner: C. A. Hufford. These stock water also at D-32N/1W-2E1. Previously irrigated an additional 4 acres.
D-32N/3W-3G1 11-19	Floyd Porteous	North Cow Creek	Irrig.	2 acres by sprinkler	Adjud.	0.20 cfs*	Schedule 3 ⁸	--	Prior 1960	Pump, 10-hp electric motor with 3-inch pipeline.	Former owner: Endicott.
D-32N/3W-4/L1 (Partial Export) 11-19	Cook and Butcher Ditch Donald E. Meyer, et al. ⁸	North Cow Creek	Irrig. Stock. Export*	8 acres 500 head (*)	Adjud.	4,500 cfs, 1,375 cfs ⁸ and 48 Schedule 6 ⁸	Schedules 3 and 4 ⁸ Schedule 6 ⁸	--	1850	Gravity, concrete dam 8 feet high, 100 feet long with 1 mile of earth ditch.	Former owners: Terry Lumber Co., Red River Lumber Co. Partial export to Sacramento Valley Floor Hydrographic Unit.
D-32N/3W-1B1 11-19	Warren Aneker	Little Cow Creek	Irrig. Stock.	4 acres 35 head	Approp.	0.2 cfs	A-11581	--	Prior 1946	Pump, 10-hp electric motor with 300 feet of 4-inch aluminum pipe.	Former owners: Ira J. Thorne and Hess.
D-32N/3W-2B1 12-19	K. I. Stevenson	Oak Run Creek	Irrig.	10 acres by sprinkler	Riparian	--	--	--	1960	Pump, 15-hp electric motor with 550 feet of 6- and 3-inch pipe.	Former owner: John Brewer

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
COW CREEK SUBUNIT (Continued)										
D-33N/1E-5-41 11-21	Welch-Strayer Ditch Welch-Strayer and Welch-Nailor Ditch Co.	North Fork Mill Creek	Irrig. Stock. Domestic	46 acres by flooding* (*) (b)	Adjud.	(*)	Par. 4 and 5	Prior 1900	Gravity; rock and wooden dam 10 feet high, 30 feet long with a total of 5.5 miles of earth ditch.	Diversion formerly called Excelsior Ditch. Original Welch and Strayer Ditch no longer in use. Supplemented by D-33N/1E-5-62. Supplements D-33N/1E- 13E1, -15K1, -19J1, -19K1, -19L1, -21C1, -21E1, -22F1, and -24J1 for additional uses reported thereunder. Previously irrigated an additional 16 acres. Right to divert 5.00 cfs from Mill Creek into Oak Run Creek. Amounts of water rights reported under D-33N/1E-15K1, -19J1, -19K1, -19L1, and -21C1 include portions of this 5.00 cfs.
D-33N/1E-5-62 11-21	Welch-Strayer Ditch Welch-Strayer and Welch-Nailor Ditch Co.	Middle and South Forks Mill Creek	Irrig. Stock. Domestic	(*) (*) (*)	Adjud.	(*)	(*)	Prior 1900	Gravity; rock and wooden dam 2 feet high, 20 feet long with a total of 5.5 miles of earth ditch.	Supplements D-33N/1E-5-41 and others listed thereunder. Water right reported under -5-91 applies.
D-33N/1E-16M1 11-22	Farley Ditch Betty Schumacher, et al.	Silver Creek	Irrig. Stock.	96 acres by flooding 150 head	Adjud.	2.00 cfs ^q	Schedule 2, k	Prior 1900	Gravity; rock and wooden dam 2.5 feet high, 40 feet long with 2.5 miles of earth ditch.	Former owners: Bibbens, Weigart, Worley.
D-33N/1E-19E1 11-21	Maxwell Ditch Henry Rye	Windham Creek	Irrig. Stock.	20 head	Adjud.	0.35 cfs ^q	Schedule 2, k	Prior 1958	Gravity; rock dam with 0.75 mile of earth ditch.	Former owners: James Newill, Maxwell, Pierson. Previously irrigated 2 1/2 acres by flooding.
D-33N/1E-20A1 11-21	Bonde Ditch E. A. Cason, Charles Lindsay, Dean Friday	Clover Creek	Irrig. Stock.	8 acres by flooding --	Adjud.	2.45 cfs ^q	Schedule 2, k	Prior 1965	Gravity; rock and log dam 2 feet high, 70 feet long with 2.4 miles of earth ditch.	Former owners: Russell E. Love, M. C. Lysinger, E. G. Weigart, Ben Halland, Vivian Fugitt.
D-33N/1E-20G1 11-21	Mill Ditch Lucille Armstrong, et al.	Clover Creek	Irrig. Stock.	322 acres by flooding --	Adjud.	4.80 cfs ^q	Schedule 2, k	Prior 1965	Gravity; rock and wooden dam 2 feet high, 55 feet long with 5.7 miles of earth ditch and a 130-acre- foot reservoir.	Former owners: W. Stacher, Narvey Klinger, R. G. Wright, J. C. Rurdick, J. B. Anderson, Fred Wheelock, John S. Sheridan, et al., T. E. Foster. Some owners have changed since 1962. Previously irrigated an additional 8 acres.
D-33N/1E-20G2 11-21	Rodgers Ditch R. H. Marine, et al. ^b	Clover Creek	Irrig. Stock.	13 acres	Adjud.	0.25 cfs ^q	Schedule 2, k	Prior 1900	Gravity; wooden dam 100 feet long with a flume.	Former owners: Bibbens, Weigart, Worley.
D-33N/1E-21A1 11-22	Gutman Ditch R. B. Whitney C. W. Van Blair	Clover Creek	Irrig. Stock. Domestic	76 acres by flooding 100 head (b)	Adjud.	1.85 cfs ^q	Schedule 2, k	Prior 1900	Gravity; rock and wooden dam 2 feet high, 12 feet long with 3.2 miles of earth ditch.	Former owners: A. F. Ray, Elizabeth Thomas, Ben Hall, Vivian Fugitt.
D-33N/1E-23B1 11-22	R. M. Murphy, Jr.	Canyon Creek	Irrig. Stock.	87 acres by flooding and sprinkler 600 head	Prescriptive	--	--	Prior 1925	Gravity; rock dam 2 feet high, 8 feet long with 4 miles of earth ditch.	Former owner: B. W. Hall. Previously irrigated an additional 1/2 acres.

^a See remarks column.

For lettered footnotes, see last page of table

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
COW CREEK SUBUNIT (Continued)										
D-33N/1E-27M1 11-22	Warren K. Grindly Wallace B. Williams	Old Cow Creek	Irrig. Stock. Fish Culture	36 acres* 130 head	Adjud.	360 MI	--	About 1880	Gravity; rock and wooden dam with two ditches, 3.5 miles and 5 miles long, a 3-acre-foot and a 5-acre-foot reservoir.	Former owners: Craven, Snell, Grindly, Williams. Previously irrigated an additional 37 acres.
D-33N/1E-32F1 11-21	Old McGamble Ditch Wallace B. Williams	Old Cow Creek	Irrig.	37 acres	Riparian	--	--	About 1918	Gravity; earth and rock dam with 2.6 miles of earth ditch.	Former owner: Wright.
D-33N/1W-3F1 11-21	Harry L. Rutherford	North Cow Creek	Irrig.	76 acres by flooding*	Adjud.	3.20 cfs 0.40 cfs	Schedule 3 ^s Schedule 6 ^s	Prior 1942	Gravity; rock and wooden dam 5 feet high, 35 feet long with 2 miles of earth ditch.	Former owner: Eldridge. Supplemented by D-33N/1W-4K1. Water right applies also to D-33N/1W-4K2.
D-33N/1W-4K1 11-21	Harry L. Rutherford	North Cow Creek	Irrig.	(*)	(c)	--	--	1942	Gravity; rock dam 3 feet high, 40 feet long with 1 mile of earth ditch.	Former owner: Eldridge. Supplemented by D-33N/1W-3F1. Extent of use reported thereunder.
D-33N/1W-4K2 11-21	George Ocker	North Cow Creek	Irrig.	50 acres by flooding	Adjud.	(*)	(*)	1924	Gravity; rock dam 1 foot high, 10 feet long with 10 feet of 1-inch pipe and 1 mile of earth ditch.	Former owners: Floyd Rogers, Duffy. Water right reported under D-33N/1W-3F1 applies.
D-33N/1W-5F1 11-20	George Sanders	North Cow Creek	Irrig.	40 acres by flooding	Adjud.	2.15 cfs ^b 0.25 cfs	Schedule 3 ^s Schedule 6 ^s	Prior 1900	Gravity; metal and wooden dam 4 feet high, 20 feet long with a concrete flume and 1 mile of earth ditch.	Former owners: Rose, Reams.
D-33N/1W-6K1 11-20	J. W. Coffman	North Cow Creek	Irrig.	46 acres by flooding	Adjud.	2.50 cfs ^d	Schedule 4 ^s	Prior 1911	Gravity; rock and wooden dam 3 feet high, 35 feet long with a wooden flume and 0.75 mile of earth ditch.	Former owners: Raines, Eiler.
D-33N/1W-13E1 11-21	Ray Bibbens	Spring tributary to Oak Run Creek	Irrig. Stock.	62 acres by flooding* 100 - 200 head*	(c)	--	--	--	Gravity; earth and wooden dam 1.5 feet high, 6 feet long with 0.5 mile of earth ditch.	Stockwatering and 20 acres of irrigated lands reported are supplemented by D-33N/1E-5Q1 and -5Q2.
D-33N/1W-13E2 11-21	Ray Bibbens	Tributaries to Oak Run Creek	Irrig. Stock.	14 acres (*)	(c)	--	--	--	Gravity; direct diversion to 0.5 mile of earth ditch.	Waters same stock reported under D-33N/1W-13E1.
D-33N/1W-15K1 11-21	Leach-Strayer and Welch-Railor Ditch Co.	Oak Run Creek	Irrig. Stock. Domestic	22 1/2 acres by flooding and sprinkler* 100 head* 1 1/2 construction*	Adjud.	2.30 cfs	Schedule 2 ^r	Prior 1900	Gravity; concrete and rock dam 3 feet high, 15 feet long with 4 miles of earth ditch.	Supplemented by D-33N/1E-5Q1, -5Q2, and D-33N/1W-22F1. Previously irrigated an additional 3 acres.
D-33N/1W-19J1 11-20	Alpaugh Ditch Merrick Str. Co. Robert Strawn	Oak Run Creek	Irrig. Stock.	16 acres by flooding* 7 head*	Adjud.	0.40 cfs	Schedule 2 ^r	Prior 1900	Gravity; rock and wooden dam 1 foot high, 10 feet long with 0.75 mile of earth ditch.	Former owner: Melton. Supplemented by D-33N/1E-5Q1 and -5Q2.

* See remarks column.
For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use	Type	Amount				Reference
COW CREEK SUBUNIT (Continued)										
D-33N/W-1-4L1 11-20 NDRM	Predmore Ditch Merrick, Ira, Robert Strawn	Oak Run Creek	Irrig. Stock. Domestic	11 1/2 acres by flooding* 70 head* (b)*	Adjud.	1.80 cfs	Schedule 2 ^r	Prior 1900	Former owners: A. H. Cook, Melton, Murphy. Supplemented by D-33N/1E-5Q1 and -5Q2. An additional 23 acres normally irrigated were dry-farmed during year of survey.	
D-33N/W-1-19L1 11-20	Kirkensuhl Ditch R. L. Paulsen	Oak Run Creek	Irrig. Stock. Domestic	4 1/2 head (*) (b)	Adjud.	0.65 cfs	Schedule 2 ^r	Prior 1900	Former owners: Pankonin, Lee Warner, Colby. Previously irrigated 20 acres by flooding jointly with D-33N/1E-5Q1, -5Q2, and D-33N/2W-24J1.	
D-33N/W-2-C1 11-21	Walter Melton Upper Ditch Jerry Strawn	Oak Run Creek	Irrig. Stock. Domestic	7 acres by flooding* 20 head* (b)*	Adjud.	0.25 cfs*	Sch. 2* ^r	Prior 1900	Former owners: A. H. Strawn, Walter Melton. Supplemented by D-33N/1E-5Q1 and -5Q2. Water right applies also to D-33N/1W-21E1.	
D-33N/W-21E1 11-21	Walter Melton South Ditch Jerry Strawn	Oak Run Creek	Irrig. Stock.	3 acres by flooding* 10 head*	Adjud.	(*)	(*)	Prior 1900	Former owners: A. H. Strawn, Walter Melton. Supplemented by D-33N/1E-5Q1 and -5Q2. Water right details reported under D-33N/1W-21C1.	
D-33N/W-22F1 11-21	Welch-Nailor Ditch Welch-Strayer and Welch-Nailor Ditch Co.	Clover Creek	Irrig. Stock. Domestic	(*) (*) (*)	Adjud.	2.15 cfs ^q	Schedule 2 ^k	Prior 1900	Supplements D-33N/1W-15K1. Extent of use reported thereunder.	
D-33N/W-22F2 11-21	Yordy Upper Ditch L. A. Yordy	Clover Creek	Irrig.	19 acres*	Adjud.	0.40 cfs ^q	Schedule 2 ^k	--	Previously irrigated an additional 5 acres.	
D-33N/W-24D1 11-21	Cunningham Spring Eather Taylor	Spring tributary Clover Creek	Irrig.	8 acres by flooding	Adjud.	(*)	(*)	Prior 1900	Former owners: Stone, Cunningham, Hunt, Wilson. Water right listed under D-33N/1W-24G1 applier.	
D-33N/W-24G1 11-21	Cunningham Ditch Eather Taylor	Clover Creek	Irrig.	39 acres by flooding	Adjud.	1.15 cfs ^q	Schedule 2 ^k	Prior 1900	Former owners: Stone, Cunningham, Hunt, Wilson.	
D-33N/W-31C1 11-20	R. M. Murphy, Sr.	Springs tributary to Post Gulch	Irrig. Stock.	49 acres 200 head*	Riparian	--	--	About 1940	Former owner: Southern Pacific Railroad. These stock water also at D-33N/1W-31F1, -31H1, -31L1, -31L2, and 31L3.	
D-33N/W-31F1 11-20	R. M. Murphy, Sr.	Spring tributary to Post Gulch	Irrig. Stock.	13 acres (*)	Riparian	--	--	About 1870	Former owner: Southern Pacific Railroad. Waters same stock reported under D-33N/1W-31C1.	
D-33N/W-31H1 11-20	R. M. Murphy, Sr.	Tributary to Clover Creek	Irrig. Stock.	40 acres (*)	Riparian	--	--	About 1870	Remarks same as D-33N/1W-31F1.	
D-33N/W-31L1 11-20	R. M. Murphy, Sr.	Post Gulch	Irrig. Stock.	5 acres (*)	Riparian	--	--	About 1870	Remarks same as D-33N/1W-31F1.	

* See remarks column.

P R lettered footnotes, see last page of table

TABLE 2 (continued)
DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
COW CREEK SUBUNIT (Continued)										
D-33N/2W-24E/11-20	R. M. Murphy, Sr.	Post Gulch	Irrig. Stock.	20 acres (*)	Riparian	--	--	About 1870	Gravity; earth dam 1 foot high, 10 feet long with an earth ditch.	Remarks same as D-33N/4W-24E/11-20.
D-33N/4W-24E/11-20	R. M. Murphy, Sr.	Post Gulch	Irrig. Stock.	10 acres (*)	Riparian	--	--	About 1870	Gravity; earth dam 1 foot high, 10 feet long with 100 feet of earth ditch.	Remarks same as D-33N/4W-24E/11-20.
D-33N/2W-24E/11-20	R. L. Paulsen	Oak Run Creek	Irrig.	(*)	(*)	--	--	Prior 1900	Pump, 4-hp gasoline engine with 4-inch pipeline and 21 sprinklers.	Former owners: Puckrind, Lee Warner, Ooley. Supplements D-33N/4W-24E/11-20. Extent of use reported thereunder.
D-33N/2W-24E/11-20	Murphy Slough Ditch Walter J. Van Osdel	Tributary to Oak Run Creek	Irrig. Stock.	65 head* (*)	Adjud.	0.25 cfs	Par. 4.7	Prior 1900	Gravity; earth dam 5 feet high, 30 feet long with 600 feet of earth ditch.	Former owners: W. N. Talbot, Hamm, R. M. Murphy. Normally irrigates 20 acres which were dry-farmed during year of survey. Supplemented by D-33N/2W-24E/11-20 for both uses and -25A3 for stock-watering. Right applies also to -25A2.
D-33N/2W-24E/11-20	Murphy Spring Walter J. Van Osdel	Murphy Spring	Irrig. Stock. Domestic	(*) (*) (*)	Adjud.	(*)	(*)	Prior 1900	Gravity; direct diversion to 80 feet of earth ditch.	Former owners: A. N. Talbot, Hamm, R. M. Murphy. Supplements D-33N/2W-24E/11-20. Irrigation and stockwatering use and water right details reported thereunder.
D-33N/2W-24E/11-20	Estep Ditch Lawrence Miller	Tributary to Oak Run Creek	Irrig. Stock.	20 acres by flooding* (*)	Adjud.	(*)	Par. 4.7	Prior 1900	--	Former owners: Chapman, Faint, Landen, McGladry, Estep. Irrigation supplemented by D-33N/2W-24E/11-20. Stock watered under D-33N/2W-24E/11-20. D-33N/2W-24E/11-20 has right to divert from this ditch.
D-33N/2W-24E/11-20	Lawrence Miller	Tributary to Oak Run Creek	Irrig.	(*)	Adjud.	--	(r)	About 1900	Pump; 7.5-hp electric motor with a 4-inch pipeline to 41 sprinklers.	Former owners: Chapman, Faint, Landen, McGladry, Estep. Supplements D-33N/2W-24E/11-20 for irrigation use reported thereunder.
D-24N/2W-24E/11-20	Winters Ditch D. M. Cannon	Oak Run Creek	Irrig. Stock.	20 acres by flooding* 20 head*	Adjud.	0.37 cfs	Par. 4.7	Prior 1900	Gravity; rock and wooden dam, 2 feet high, 20 feet long with flume and 1.7 mile of earth ditch.	Former owners: Ben Warner, Miller, Darrald, R. Winters. Supplemented by D-33N/2W-24E/11-20.
D-33N/2W-24E/11-20	D. M. Cannon	Spring tributary to Oak Run Creek	Irrig. Stock. Domestic	(*) (*) (*)	Adjud.	0.02 cfs	Par. 4.7	Prior 1900	Gravity; direct diversion to 20 feet of earth ditch.	Former owners: Ben Warner, Miller, Darrald, R. Winters. Supplements D-33N/2W-24E/11-20 for uses reported thereunder.
D-33N/2W-24E/11-20	Mirror Lake Richard B. Schires	Tributary to Jim Creek	Stock.	--	Approp.	50 afa	A-19/84	Prior 1902	Storage; earth dam 10 feet high, 240 feet long with 2-acre-foot reservoir.	Former owners: Ben Warner, Miller, Darrald, R. Winters. Supplements D-33N/2W-24E/11-20 for uses reported thereunder.
D-33N/2W-24E/11-20	George Rickert George Rutherford	North Cow Creek	Irrig. Stock.	130 acres* 20 head	Adjud.	2.45 cfs	Par. 4.7	--	Gravity; concrete dam 6 feet high, 30 feet long with 3 miles of earth ditch.	Former owners: Es Frisbee, Charles Lem. W. W. Winters. Previously irrigated an additional 1 acre.

* See remarks D-11-11.
For additional details, see list page of table

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and figure	Diversion name and/or owner	Source	Water use in 1962			Apparent water right			Indicated date of operation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a				
COW CREEK SUBUNIT (Continued)											
D-34N/1E-18N1 (Import) 1-21	Louis Colbert	Willow Creek*	Irrig. Stock.	30 head (*)	(c)	--	--	Prior 1900	Gravity and storage; earth dam 10 feet high, 30 feet long with 10-acre-foot reservoir and 0.5 mile of earth ditch.	Diversion location number describes point of entry into unit from Lower Pit River Hydrographic Unit. Former owner: Anna Davidson. Previously irrigated 5 acres.	
D-34N/1E-18N2 (Import) 1-21	Irtz H. Jordan*	Willow Creek*	Irrig. Stock.	5 acres by furrow 12 head	Approp.	--	--	About 1901	Gravity; earth dam 7 inches high, 6 feet long, with 750 feet of earth ditch and 450 feet of pipe.	Diversion location number describes point of entry in unit from Lower Pit River Hydrographic Unit. Former owners: Sig Erickson, Reese Thompson. Ownership changed to Ernest Parscale in 1944.	
D-34N/1E-19N1 10-21	Lois Colbert	School House Spring	Irrig. Stock.	6 acres by flooding 5 head	Adjud.	(*)	Par. 9 ^s	--	Gravity and storage; direct diversion to 0.75 mile of earth ditch with an 8-acre-foot reservoir.	Former owner: Anna Davidson. Right to divert entire spring.	
D-34N/1E-20B1 (Partial export) 1-21	Robert Miller	Cedar Creek	Irrig. Stock. Export*	6 acres by furrow* 30 head* (*)	Adjud.	0.50 cfs ^q	Schedule 2 ^s	1894	Gravity; earth and rock dam 1 foot high, 10 feet long with 0.5 mile of earth ditch.	Former owners: Gilbert Reen, W. E. Biedleman, Elbert J. Lilly, H. O. Bishop. Partial export to Lower Pit River Hydrographic Unit.	
D-34N/1E-20F1 1-21	Percy A. McMillan	Lindsay Spring	Irrig.	11 acres*	Adjud.	0.65 cfs 0.15 cfs	Par. 38 ^s Par. 3 ^d	About 1883	Gravity; earth dam 2 feet high, 8 feet long with 2 miles of earth ditch and two small reservoirs.	Former owners: Fred Ball, Bowen, Friabee. Previously irrigated an additional 90 acres.	
D-34N/1E-20F1 1-21	Zamboni Lumber Co.	Little Cow Creek	Indust. Domestic	Lumber Mill 100 persons	Adjud.	1.25 cfs ⁿ 0.125 cfs ^q	Schedules 3 and 4 ^s Schedule 4 ^s	About 1872	Gravity; rock dam 1 foot high, 15 feet long with 5 miles of earth ditch and wooden flume.	Former owner: Mascn	
D-34N/1E-20J1 1-21	Silvers Ditch Frank T. Wood	North Cow Creek	Irrig.	6 acres	(c)	--	--	1920	Gravity; rock and wooden dam 1 foot high, 10 feet long with 2.5 miles of earth ditch, and a 7-acre surface area reservoir.	Former owners: Friabee, Silvers, Paucett, Bill Cannon.	
D-34N/1E-30G1 1-22	Percy K. McMillan	Beetree Creek	Irrig. Domestic	33 acres by flooding (t)	Riparian	--	--	Prior 1900	Gravity; wooden dam 4 feet high, 12 feet long with one mile of earth ditch.	Former owner: Stanford Scott	
D-34N/1E-13N1 (Partial export) 1-21	Bidwell Ditch J. C. Tramm	Cedar Creek	Irrig.* Export*	(*) (*)	Adjud.	4,000 cfs ^q	Schedule 2 ^s	About 1900	Gravity; rock dam 1 foot high, 10 feet long with 1 mile of earth ditch.	Former owners: Bidwell, Ed Charles, Lee West, Haley, Frances, Walcomb. Partial export to Lower Pit River Hydrographic Unit. Also Supplements D-34N/1E-24C1 for use reported thereunder.	
D-34N/1E-14B1 1-22	Joel H. and Clara M. Parbo-	Cedar Creek	Irrig.	3 acres	Adjud.	0.30 cfs ^q	Schedule 2 ^s	1894	Gravity; rock dam 1 foot high, 10 feet long with 500 feet of earth ditch.	Former owners: Mazzini, LaGue, Fites.	
D-34N/1E-24C1 1-21	King Ditch J. C. Tramm	Cedar Creek	Irrig.	3 acres*	Adjud.	1.30 cfs ^q	Schedule 2 ^s	Prior 1900	Gravity; rock dam 1 foot high, 10 feet long with 2.1 miles of earth ditch.	Former owners: King Brothers. Supplemented by D-34N/1E-13N1. Previously irrigated an additional 14 acres.	

^a See related map. For entered number, see last page of title.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

Location number and/or Figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use	Type	Amount				References
COW CREEK SUBUNIT (Continued)										
D-25N/14-241 1-2	Deer Creek Dye Greenwash	Cow Creek	Irrig.	1 ¹ acres by sprinkler	(c)	--	--	1/23	Pump, 7-h.p. electric motor with 4-inch pipeline.	Former owner: Parker, Bailey, Eaver
D-25N/14-241 1-21	Pedro de Grant, Jones (lith.) William A. Brown W. F. and F. M. Gillan Charles Johnson	North Cow Creek	Irrig.	211 acres by flooding	Adjud.	2,600 cfs ^a	Schedules 3 and 4 Schedule 6's 1-2 ¹ cfs ^a 1-2 ¹ cfs ^a 1-2 ¹ cfs ^a Par. 6A	Prior 1-1/8	Gravity, rock dam 1 foot high, 10 feet long with 4 miles of earth ditch.	Former owner: A. F. Petersen, Jr., et al. Also has right to receive storm waters during non-irrigation season.
DEER CREEK SUBUNIT										
D-25N/14-250 (Export) 16-21	Deer Creek Irrigation Dist.	Deer Creek	Export*	(*)	Adjud.	1/3 cfs flow	(s)	Prior 1/2	Gravity, concrete and wood dam 3 feet high, 80 feet long with an earth ditch.	Water is exported to Sacramento Valley Flood Hydrographic Unit.
D-25N/14-251 14-22	Hal T. and Bessie J. Hyton	Fern Springs	Domestic Power	68 connections* 31.2 KW capacity,*	Approp.	3.0 cfs	A-120/6	Prior 1/4	Gravity, rock and rubble dam 2 feet high, 1/4 feet long with 1.4 mile of 6-inch iron pipe and some 4-inch pipe.	Domestic use includes some seasonal use. Power use supplemented by D-25N/14-252.
D-25N/14-252 14-23	Hal T. and Bessie J. Hyton	Fern Springs	Power	(*)	Approp.	3.0 cfs	A-120/6	1/4	Gravity, concrete and earth dam 3 feet high, 1/4 feet long with 1.3 mile of 8-inch pipe.	Supplements D-25N/14-251. Extent of use reported there after.
D-25N/14-253 14-24	Ernest Fink	Lost Creek	Power	60 KW capacity	Approp.	4.0 cfs	A-15/53	1/4	Gravity, concrete dam 6 feet high, 30 feet long with storage reservoir and 700 feet of 2-inch pipe.	
D-25N/14-254 14-25	Ernest Fink	Spring tributary to Deer Creek	Domestic	11 connections	Approp.	800 GPD	A-2/25	1/4	Gravity, concrete diversion box 10 feet long, 1 foot wide with a storage reservoir and 1.5 mile of 3-inch pipe.	
D-25N/14-255 14-26	Walter Albert	Deer Creek	Domestic Power	12 connections Approx. 1.5 KW	Approp.	0.2 cfs 5,000 GPD	A-197/68 A-197/38	1/4	Gravity, concrete dam 6 feet wide, 60 feet long with 0.7 mile of 6-inch pipe.	
D-25N/14-256 14-27	Krich Weiler*	Deer Creek	Domestic Power Recreation	12 connections and pool 2 KW capacity Swimming Pool	Approp.	1 cfs	A-1-2-2	1/21	Gravity, earth dam 5 feet high, 10 feet long with 1.4 miles of pipeline.	Ownership has been changed since survey.
MILL CREEK SUBUNIT										
D-25N/14-257 (Export) 16-2	C. F. Stover Estate	Dye Creek	Export*	(*)	Riparian	--	--	Prior 1/4	Gravity, direct diversion to 3- and 4-inch diameter pipe line.	Former owner: Litch Cattle Co. Water is exported to Sacramento Valley Flood Hydrographic Unit.

^a See remarks column.

For lettered footnotes, see last page of table.

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a			
MILL CREEK SUBUNIT (Continued)										
D-2N/4E-2D-15-23 MGBM	L. L. Housman	Spring tributary to Mill Creek	Irrig. Domestic Stock.	3 acres by flooding (b) 10 head	Riparian	--	--	Prior 1914	Gravity; earth dam with 2-inch diameter pipeline to storage tank and 0.5 mile of earth ditch.	Former owners: Chase and Thompson
D-2N/4E-2L1-1-24	Mrs. R. W. Hanna	Spring tributary to Mill Creek	Irrig. Stock.	24 acres 300 head*	Riparian	--	--	Prior 1925	Gravity; log dam 2 feet high, 3 feet long with 200 feet of earth ditch.	These stock water also at D-2N/4E-11L1, -11L2, -11L3, -11L4, -11L5, and -11C1.
D-2N/4E-11L1-1-24	Mrs. R. W. Hanna	Tributary to Mill Creek	Irrig. Stock.	42 acres*	Riparian	--	--	Prior 1925	Gravity; direct diversion to 50 feet of earth ditch.	Irrigation supplemented by D-2N/4E-11L2, -11L3, -11L5, and -11C1. Waters same stock reported under D-2N/4E-2L1.
D-2N/4E-11L2-1-24	Mrs. R. W. Hanna	Tributary to Mill Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1925	Gravity; direct diversion to 600 feet of earth ditch.	Extent of irrigation reported under D-2N/4E-11L1. Waters same stock reported under D-2N/4E-2L1.
D-2N/4E-11L3-1-24	Mrs. R. W. Hanna	Tributary to Mill Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1925	Gravity; direct diversion to 300 feet of earth ditch.	Remarks for D-2N/4E-11L2 apply.
D-2N/4E-11L4-1-24	Mrs. R. W. Hanna	Springs tributary to Mill Creek	Irrig. Stock.	194 acres (*)	Riparian	--	--	Prior 1925	Gravity; rock dam 1 foot high, 2 feet long and wooden diversion box with 2 miles of earth ditch.	Waters same stock reported under D-2N/4E-2L1.
D-2N/4E-11L5-1-24	Mrs. R. W. Hanna	Canyon Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1925	Gravity; 300 feet of earth ditch.	Remarks for D-2N/4E-11L2 apply.
D-2N/4E-11L6-1-24	Mrs. R. W. Hanna	Tributary to Mill Creek	Irrig. Stock.	(*) (*)	Riparian	--	--	Prior 1925	Gravity; earth dam 2 feet high, 50 feet long with an earth ditch.	Remarks for D-2N/4E-11L2 apply.
D-2N/4E-11C1-1-24	Mrs. R. W. Hanna	Tributary to Mill Creek	Irrig. Stock.	17 acres (*)	Riparian	--	--	Prior 1925	Gravity; earth and rock dam 1 foot high, 20 feet long with 50 feet of earth ditch.	Waters same stock reported under D-2N/4E-2L1.
D-2N/4E-24C1-1-24	Raymond T. and Bertha Titus	Tributaries to Mill Creek	Domestic Recreation	60 connections* Swimming Pool*	Prescriptive	--	--	1911	Gravity; earth and rock dam 3 feet high, 45 feet long with 270 feet of earth ditch and 0.3 mile of 4-inch pipe.	Former owners: Tyler, Childs, W. J. Latka. Supplemented by D-2N/4E-24F1.
D-2N/4E-24F1-1-24	Raymond T. and Bertha Titus	Tributary to Guernsey Creek	Domestic Recreation	(*) (*)	Prescriptive	--	--	Prior 1875	Gravity; wooden dam with 2-inch pipeline.	Remarks for D-2N/4E-24C1 apply.
D-2N/4E-411-1-24	United States Lassen National Forest	Spring Tributary to Mill Creek	Domestic	120 connections	Approp.	15,000 GFD	A-1134b	1924	Gravity; concrete dam 4 feet high 6 feet long with 2- and 4-inch pipelines.	
PAYNES CREEK SUBUNIT										
D-2N/1E-1JH1-1-22	Paynes Creek Spattersen's Assoc.	Springs tributary Plum Creek	Domestic Stock.	21 connections 100 head	Riparian	--	--	1953	Gravity; two metal diversion boxes each 3 feet high with 1 mile of 1.5-inch pipe.	Former owner: Supan
D-2N/1E-2H1-1-22	Ralph Marlan*	Plum Creek	Irrig.	6 acres by flooding	--	--	--	--	Gravity; wooden dam 5 feet high, 20 feet long with 0.35 mile of earth ditch.	Ownership has changed since 1942

^a See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTORS OF SURFACE WATER DIVERSIONS

Location number and figure	Diversion name and/or owner	Source	Water use in 1962		Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use	Type	Amount				Reference ^a
PAYNES CREEK SUBUNIT (Continued)										
D-28N 14-2M1 14-22	California State Dept. of Natural Resources, Division of Forestry	Spring tributary to Plum Creek	Domestic	107 persons	Approp.	.062 cfs	A-14280	1960	Gravity; concrete diversion box 10 feet long, 6 feet wide with 2 miles of 3-inch plastic pipe.	
D-28N 14-2M1 14-22	California State Dept. of Fish and Game	Plum Creek	Irrig. Stock.	1 ¹ acres 3 head	Riparian	--	--	1961	Gravity, earth and rock dam 10 feet high, 20 feet long with 1.5 miles of earth ditch.	Former owners: Morgan, Spang, Greer
D-28N 14-2M1 14-21	Rimrock Ranch Meador Ranch Cattle Co., Clifton, Hill County	Springs tributary to Paynes Creek	Irrig. Stock. Domestic Fish Culture	62 acres by sprinkler (1) 200 head (2) 300 lbs. trout*	Approp.	100 MI	--	1960	Pump and storage, 3 electric pumps and 4 wooden diversion boxes with 300 feet of 18-inch pipe and fish pond.	Former owner: W. F. Gerber (ownership changed to Bill Nunn after 1960. Supplemented by D-28N 14-2M1 14-22 MI for fish culture.)
D-28N 14-2M1 14-21	Rimrock Ranch Meador Ranch Cattle Co.	Plum Creek	Irrig.	18 acres by sprinkler	Riparian	--	--	--	Pump; 10-h.p. electric motor with 2 feet of 4-inch steel pipe	
D-28N 14-2M1 14-21	Rimrock Ranch Meador Ranch Cattle Co.	Plum Creek	Irrig.	24 acres by sprinkler	Riparian	--	--	--	Pump; 15-h.p. electric motor with 20 feet of 4-inch steel pipe.	
D-28N 14-2M1 14-21	P. L. Sagan	Paynes Creek	Irrig. Stock.	1 acre by sprinkler (b) 6 head	Riparian	--	--	1964	Pump; 1-h.p. electric motor with 300 feet of 2-inch aluminum pipe	
D-28N 14-2M1 14-21	Marion Perini	Plum Creek	Irrig. Stock. Domestic	10 acres 74 head (b)	Riparian	--	--	Prior 1962	Pump; 1-h.p. gasoline engine with 50 feet of 3-inch aluminum pipe	
D-28N 14-2M1 14-21	V. F. Chilton	Paynes Creek	Irrig.	(*)	Approp.	100 MI 27 afa	(b) A-24331	1980	Gravity, rock dam 1 foot high, 10 feet long with 0.2 mile of earth ditch.	Former owner: W. E. Gerber, previously irrigated 30 acres. Supplemented by 47 and water wheel in use.
D-28N 14-2M1 14-2	Frank McIntosh	Springs tributary to Paynes Creek	Irrig. Stock. Domestic	114 acres by flooding (a) 365 head	Riparian	--	--	Prior 1961	Gravity, earth and rock dam with one mile of earth ditch.	Former owners: Truman Varden, McIntosh
D-28N 14-2M1 14-2	Walter Dale	Springs tributary to Paynes Creek	Irrig.	6 acres	(c)	--	--	1960	Gravity, direct diversion to 4 feet of 4-inch concrete pipe.	Former owners: Joe Dale, Beth Dale.
D-28N 14-2M1 14-2	Walter Dale	Paynes Creek	Irrig. Stock.	2 acres by flooding (a) 7 head	Riparian	--	--	1961	Gravity, concrete dam 6 feet high, 20 feet long with 1 miles of earth ditch.	Former owners: Joe Dale, Beth Dale.
D-28N 14-2M1 14-2	Walter Dale	Springs tributary to Paynes Creek	Fish Culture	(*)	(c)	--	--	1961	Gravity, direct diversion to 4-inch diameter steel and concrete pipes to numerous fish ponds.	Former owners: Joe Dale, Beth Dale (ownership is being sold). Extent of use reported thereunder.
D-28N 14-2M1 14-2	Walter Dale	Paynes Creek	Irrig.	10 acres by flooding	Riparian	--	--	1960	Gravity and pump; earth and rock dam 1 foot high, 70 feet long and 1-h.p. electric pump with 1.5 feet of 4-inch steel pipe	Former owners: Joe Dale, Beth Dale

^a See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

(Pacific Gas & Electric Co.)

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a			
BATTLE CREEK SUBUNIT										
D-2-N/1E-1K1 13-21	Inskip Ditch Pacific Gas and Electric Co.	South Fork Battle Creek*	Power Irrig.*	6,000 kva capacity* 32 acres*	Approp.	--	--	1910	Gravity; rock and concrete dam 30 feet high, 60 feet long, with 4.5 miles of earth ditch and 0.25 mile pipeline to junction with conduit of D-30N/1W-2K1.	Diverts tailwater from South Powerhouse in addition to natural flow. Supplemented by D-20N/1W-1B1 and D-30N/1W-2K1 for operation of Inskip Powerhouse. Of area irrigated, 15 acres received supplemental supply from D-20N/1W-1B1. Irrigation is incidental use by others. Supplements D-20N/2E-1B1. Extent of use reported thereunder.
D-20N/1E-1B1 13-22	Soap Creek Feeder Pacific Gas and Electric Co.	Soap Creek	Power Irrig.	(*) (*)	Approp.	6,280 MI	Bk.1, P.4 ^{2b}	1907	Gravity; concrete dam, 10 feet high, 40 feet long with 350 feet of 24-inch pipe to junction with D-20N/2E-1B1.	
D-20N/2E-1B1 14-22	South Battle Creek Canal* Pacific Gas and Electric Co.	South Fork Battle Creek	Power Irrig.*	4,000 kva capacity* 24 acres*	Approp.	12,750 MI	--	1907	Gravity; rock and wood dam 20 feet high, 200 feet long with 5.7 miles of earth ditch and tunnels to penstock.	Called Union Canal below junction with D-30N/1E-1B2. Supplemented by D-20N/1E-1B1, D-30N/1E-1B1, -15E1, -16B1, -16B2, -22E1 and -33Q1 for operation of South Powerhouse and irrigation. Irrigation is incidental use by others.
D-20N/1E-1B1 15-21	Hipley Creek Feeder Pacific Gas and Electric Co.	Hipley Creek	Power Irrig.	(*) (*)	Approp.	--	--	1911	Gravity; concrete dam 4 feet high, 16 feet long with 0.1 mile of earth ditch to junction with D-20N/1E-5K1.	Supplements D-20N/1E-5K1. Extent of use reported thereunder.
D-20N/1W-3B1 15-21	Coleman Canal Pacific Gas and Electric Co.	South Fork Battle Creek	Power Irrig.*	17,250 kva capacity* 317 acres*	Approp.	11,000 MI	(h)	1911	Gravity; concrete dam 10 feet high, 70 feet long with 10.4 miles of earth ditch, flume, pipeline, and tunnel to a storage reservoir and penstock.	Former owner: Northern California Power Co. Supplemented by D-30N/1W-2P1, -24A1, and -29C1 for operation of Coleman Powerhouse and irrigation of 305 acres of area reported. The additional 12 acres received supplemental supply from D-30N/1W-2P1 and -29A1 only. Irrigation is incidental use by others.
D-20N/1E-1B1 15-22	Lower Mill Creek Canal Pacific Gas and Electric Co.	Millseat Creek*	Power	(*)	Approp.	--	--	1909	Gravity; concrete and flashboard dam, 6 feet high, 40 feet long, with 0.8 mile of earth ditch to Grace Lake.	Diverts water released from D-32N/2E-20R1 and D-31N/2E-15H1 and supplemental flow. Details of use of combined supply reported under D-20N/2E-20R1
D-20N/1E-1B1 15-23	Brush Creek - Grace Lake Canal Pacific Gas and Electric Co.	Brush Creek	Power Irrig.	(*) (*)	--	--	--	--	Gravity; earth and rock dam, 4 feet high, 12 feet long with 500 feet of earth ditch to Millseat Creek for redirection at D-30N/1E-1P1	Supplements D-20N/2E-1P1 through D-30N/1E-1B1 and Cross Country Ditch, D-30N/1E-1B2. Details of use of combined supply reported under D-20N/2E-1P1.
D-20N/1E-1B1 15-24	North Battle Creek Feeder Pacific Gas and Electric Co.	North Fork Battle Creek	Power Irrig.	(*) (*)	Approp.	11,275 MI 5,000 MI 2,000 MI	Bk.2, P.97 ^f Bk.2, P.104 ^f	1902	Gravity; concrete dam 10 feet high, 75 feet long with 0.1 mile of flume to junction with Cross Country Ditch, D-30N/1E-1B2.	Former owner: Northern California Power Co. Supplements D-20N/2E-1P1 through Cross Country Ditch, D-30N/1E-1B2. Details of use of combined supply reported under D-20N/2E-1P1.
D-20N/1E-1B1 15-25	Millseat Diversion Pacific Gas and Electric Co.	Millseat Creek	Power Irrig.	(*) (*)	Approp.	800 MI	--	1900	Gravity; concrete dam 8 feet high, 35 feet long with 60 feet of 24-inch pipe to junction with Cross Country Ditch, D-30N/1E-1B2.	Supplements D-20N/2E-1B1 through Cross Country Ditch, D-30N/1E-1B2. Details of use of combined supply reported under D-20N/2E-1B1.

* See remark, table.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

(Pacific Gas & Electric Co.)

Location number and/or figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount			
BATTLE CREEK SUBUNIT (Continued)									
D-31N/2E-20B1 12-22	Smith Ditch Pacific Gas and Electric Co. G. E. Truett and Sons	North Fork Battle Creek	Power Irrig.	(*) 16 acres	Approp.	14.92 MI	--	1880	Diverts natural flow for irrigation use and 10KW power plant for Truett and an undetermined portion of water stored at D-32N/3E-20B1 and D-31N/2E-15B1 for operation of Volta Powerhouse via Milliseat Creek and redistribution at D-30N/1E-3C1. Extent of power use reported under D-32N/3E-20B1.
D-32N/3E-20B1 12-23	North Battle Creek Reservoir Pacific Gas and Electric Co.	North Fork Battle Creek	Power*	7,000 kva capacity*	Approp.	--	--	About 1909	Water is released downstream to D-31N/2E-15B1 for further storage and for redistribution by D-30N/1E-3C1, D-31N/1E-36B1 and D-31N/2E-30B1. Combined supply is supplemented by D-31N/1E-33B1 (Cow Creek Subunit) for operation of Volta Powerhouse.
BUTTE CREEK SUBUNIT									
D-23N/3E-11D1 5-23	Centerville Canal Pacific Gas and Electric Co.	Butte Creek*	Power Irrig. Stock.	(*) 6,400 KW capacity* 11 head*	Adjul.	179,500 cfs ^b 0.50 cfs ^b	Schedule 4 ^b Par. 13P-2 ^b Schedule 1 ^b	1917	Source includes tailwater from De Sabla Powerhouse. Supplemented by D-23N/3E-11D1. Combined supply operates Centerville Powerhouse and includes water for other uses by Coleman under prior right. Right of 179,500 cfs for power generation only. Right to divert entire flow of Helltown Ravine for power generation.
D-23N/3E-11D1 10-24	Upper Centerville Canal Pacific Gas and Electric Co.	Middle Butte Creek	Power Irrig.* Domestic*	(*) (*) (b)	Approp.	--	--	Prior 1900	Former owners: Unknown mining interests, Valley Counties Power Co. Supplements D-23N/3E-10E1 for operation of Centerville Powerhouse. Irrigation and domestic use is by others along the ditch.
D-23N/3E-11Q1 11-24	Pacific Gas and Electric Co.	North Fork Stevens Creek	Power Domestic	(*) --	Adjul.	(*)	Par. 12 ^d	Prior 1909	Former owner: Valley Counties Power Company. Supplements D-23N/3E-3F1. Right to divert entire creek for power generation.
D-24N/3E-12B1 7-24	Pacific Gas and Electric Co.	South Fork Stevens Creek	Power	(*)	Adjul.	(*)	Par. 13 ^d	Prior 1919	Remarks for D-23N/3E-1Q1 apply
D-24N/3E-12Q1 17-24	Clear Creek Diversifier Pacific Gas and Electric Co.	Clear Creek	Power Domestic	(*) (*)	Approp.	(*)	Par. 14 ^d	Prior 1907	Supplements D-23N/3E-3F1. Extent of use reported thereunder. Right to divert entire flow of Clear Creek for power generation.

^a See remarks column.^b For retention of notes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

(Pacific Gas & Electric Co.)

Location number and Figure number	Diversion name and/or owner	Source	Water use in 1962			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference ^a				
BUTTE CREEK SUBUNIT (Continued)											
D-24N/3E-3F1 17-24	Troutman Canal Pacific Gas and Electric Co.	Little Butte Creek*	Power	(*)	Approp.	12.5 cfs	--	--	1874	Gravity; concrete dam 20 feet high, 20 feet long, with 20 feet of 24-inch steel pipe and 2.4 miles of earth ditch to junction with D-2'N 3E-3'F1.	Supplements D-2'N 3E-3'F1. Extent of use reported thereunder. Benefits water released by D-2'N 4E-3'F1.
D-24N/4E-3M1 (Import) 17-24	Hendricks Canal Pacific Gas and Electric Co.	West Branch Feather River*	Power Domestic	(*) (*)	Approp.	3,000 MI	--	--	1868	Gravity; one mile of earth ditch from point of entry to junction with Troutman Canal, D-2'N 3E-3'F1.	Import from Feather River Hydrographic Unit. Diversion described in Bulletin No. 44, 17. "Land and Water Use in Feather River Hydrographic Unit." Location indicated is point of entry to this unit. Supplements D-2'N 3E-3'F1. Extent of use reported thereunder.
D-2'N/3E-3F1 17-24	Butte Canal Pacific Gas and Electric Co.	Butte Creek	Power Domestic	20,000 KW capacity* 10 connections	Adjud.	88.51 cfs* 1,500 cfs*	Schedule 4d Schedule 4d	--	1871	Gravity; concrete dam 145 feet high, 110 feet long, with 11 miles of concrete-lined ditch, tunnels and flume.	Former owner: Old Cherokee Mining Co. Supplemented by D-2'N 3E-3'F1, 1-2B1, 1-2C1, 1-3'F1, D-2'N 4E-3'F1 and D-2'N 3E-3'F1 for operation of DeSaba Powerhouse and associated domestic use. Right of 88.51 cfs for minimum impulsive use only.
D-2'N/3E-3K1 17-24	Pacific Gas and Electric Co.	Inskip Creek	Power Domestic	(*) (*)	Approp.	--	--	--	Prior 1900	Gravity; direct diversion to 300 feet of wood flume to junction with Butte Canal, D-2'N 3E-3'F1.	Supplements D-2'N 3E-3'F1. Extent of use reported thereunder.
COW CREEK SUBUNIT											
D-21N/4E-3B1 12-22	Shingle Creek Canal Pacific Gas and Electric Co.	Ash Creek	Power	(*)	Approp.	120 MI	--	--	About 1870	Gravity; sandbag dam 2 feet high, 8 feet long, with 1.5 miles of earth ditch to Grace Lake.	Former owner: Northern California Power Company. Supplements D-32N 3E-2'F1, (Battle Creek Subunit). Details of use of confined supply reported thereunder.
D-32N/1W-2B1 12-21	Mill Creek - South Cow Creek Canal Pacific Gas and Electric Co.	Mill Creek	Power	(*)	Approp.	200 MI 300 MI	--	--	1947	Gravity; concrete dam 2 feet high, 3 feet long, with 2,500 feet of earth ditch to South Cow Creek for redelivery by D-32N 1W-2'F1.	Former owner: Northern California Power Co. Supplements D-32N 1W-2'F1. Details of use reported thereunder.
D-32N/1W-3B1 12-21	South Cow Creek Main Canal Pacific Gas and Electric Co.	South Cow Creek	Power*	1,800 KW capacity*	Approp.	100 MI 2,000 MI	--	--	1904	Gravity; gravel and wood dam 6 feet high, 4 feet long, with 2 miles of earth ditch and 1.8 mile of penstock.	Former owner: Northern California Power Co. Supplemented by D-32N 1W-2'F1. Combined supply operates South Cow Creek Powerhouse.
D-33N/1E-2J1 11-22	South Canyon Creek Canal Pacific Gas and Electric Co.	South Canyon Creek	Power	(*)	Approp.	47.7 MI	--	--	1902	Gravity; earth dam 10 feet high, 10 feet long, with 0.3-mile earth ditch to D-33N 1E-2'F1.	Former owner: Northern California Power Co. Supplements D-33N 1E-2'F1 for extent of use reported thereunder.

* See remarks column.

For lettered footnotes, see last page of table.

TABLE 2 (continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS

(Pacific Gas & Electric Co.)

Location number and figure number	Diversion name and/or owner	Source	Water use in 1962		Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type	Amount	Reference			
COW CREEK SUBUNIT (Continued)										
D-33W/1E-24N/11-22	North Canyon Creek Canal, Pacific Gas and Electric Co.	North Canyon Creek	Power	(*)	Approp.	150 MI	--	1907	Gravity; concrete dam 1.5 feet high, 22 feet long, with 0.7-mile earth ditch to 0.25-mile siphon.	Remarks for D-33W/1E-23J apply.
D-33W/1E-25G/11-22	Killare Main Canal, Pacific Gas and Electric Co.	Old Cow Creek	Power*	3,000 kva capacity*	Approp.	10,000 MI	--	1900	Gravity; 3.6 miles of earth ditch to 30-acre-foot forebay and 4,800 feet of Penstock.	Former owner: Northern California Power Co. Serves Killare Powerhouse.

* See remarks column.

Footnotes

- a - Reference numbers prefixed "A-" identify applications to appropriate water on file with State Water Rights Board.
- b - Domestic use is less than five connections.
- c - Insufficient information to determine type of water right.
- d - Butte Creek Adjudication, Butte County Superior Court, Case No. 18417, June 22, 1942, see page 45.
- f - Shasta County records.
- g - Owners during year of survey are listed in "Index to Surface Water Divisions", Table 6.
- h - Tehama County records.
- j - Shasta County Book of Patents, Book 1.
- k - Oliver Creek Adjudication, Shasta County Superior Court, Case No. 6904, October 7, 1941, see page 41.
- l - Subsequent to survey ownership sold to Louis Abriel.
- m - Water right amount is for all year.
- n - Water right amount is for period from April 1 to October 1.
- o - Water right amount is for period from May 1 to October 1.
- p - Oak Run Creek Adjudication, Shasta County Superior Court, Case No. 1, July 26, 1942, see page 45.
- q - North Cow Creek Adjudication, Shasta County Superior Court, Case No. 5844, October 20, 1941, see page 43.
- r - Water right amount is for odd numbered weeks of period from May 1 to October 1.
- s - Water right amount is for even numbered weeks of period from May 1 to October 1.
- t - Office report "Necessity for Watermaster Service on Digger Creek", May 1964.
- u - Shasta County Superior Court Adjudication, Case No. 1774, February 6, 1941.
- v - Tehama County Superior Court Adjudication, Case No. 4184, November 27, 1941.

TABLE 3

BUTTE CREEK ADJUDICATION

(Case No. 18417, Butte County Superior Court)

Classes of Rights	Foreign Water Rediversion Group	Nonconsumptive Use Group	Little Butte Creek Group		Upper Butte Creek Group		Butte Creek Group
			Special	Interrelated	Special	Interrelated	
Not classified.	Not classified.	Not classified.					Special, interrelated, and similar.
See remarks below	See remarks below	16 diversions adjudicated. Each right declared superior to those downstream and inferior to those upstream from its point of diversion.	13 rights adjudicated.	18 diversions adjudicated, with 4 different priorities of right.	6 rights adjudicated.	25 diversions, adjudicated with first priority rights, 3 of these also assigned second priority rights.	See remarks below
Conclusions and Stipulations							
Diversions Described in this Report	None	D-26N/4E-21P1 and -28E1 for potable domestic water. D-23N/3E-10E1 and D-25N/3E-36F1 for power generation.	D-22N/3E-20F1 and -20E2. D-23N/3E-2K1	D-22N/3E-4H1 and -20C1. D-23N/3E-2H1, -2H2. D-24N/3E-36D1	None	D-23N/3E-10E1. D-24N/3E-36F1. D-25N/4E-12F1, -13A1, -13B1, -13D1, -21J1, -21J2, -21P1, -21Q1, -21Q2, -21R1, -22D1, -28B1, and -28E1.	None
Remarks	This water, imported from West Branch of the Feather River, is rediverted downstream from this hydrographic unit.						All diversions of this group are downstream from this hydrographic unit, and rights are inferior to those in the other 4 groups.

Digger Creek Water Rights
by Adjudications and Watermasters

Diversion Location	Diversion Name	Maximum Allotments Under Case No. 4570	Miners Inches Equivalent to	Miners Inches Equivalent to	Miners Inches Equivalent to	Alotment Set in 1964 by Watermasters	REMARKS
			0.025 cfs ^a	0.025 cfs ^b			
D-30N/2E-24Q1	Mill	350				7.00 cfs	For non-consumptive use only.
D-30N/2E-26B3	Randall or Wilson	20				0.40 cfs	
D-30N/2E-26B2	South Bergin		100			1.25 cfs	
D-30N/2E-26B1	Campbell and Green	175				4.00 cfs	Includes 0.50 cfs originally allotted to North Bergin Ditch
D-30N/2E-27A1	Love's Mill					2.00 cfs	
D-30N/2E-27C1	Thomas J. Pritchard		125			3.125 cfs	
D-30N/2E-27D1	H. H. Pritchard		18			0.45 cfs	
D-30N/2E-21P1	Boole		105			7.90 cfs	Includes 5.80 cfs originally allotted to other ditches not now in use.
D-30N/2E-19L1	Williams					1.10 cfs	
D-30N/1E-23L1	Crooker		150			2.20 cfs	Increased to 2.70 cfs after July 1.
D-30N/1E-23E1	Harrison					0.80 cfs	Reduced to 0.30 cfs after July 1.

^a Miners inches "measured under 4-inch pressure", as per decrees in Cases Nos. 2213 and 3327.

^b Miners inches "measured under 6-inch pressure", as per decree in Case No. 3214.

TABLE 5
APPLICATIONS TO APPROPRIATE WATER IN
SACRAMENTO VALLEY NORTHEAST HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of January 20, 1965)

Application number and Status*	Date filed	Present owner	Diversion location number	Source	Location of point of diversion				Amount	Period of diversion	Purpose
					1/4	1/4	Sec	T			
322-L	4/28/16	Howard A. Clough	--	Mill Creek	NE	NW	1	25N	2W	1/1 - 6/1	Irrigation
476-P	9/21/16	Paradise Irrigation District	D-23N/3E-75E1	Little Butte Creek	SE	SE	25	23N	3E	--	Domestic, Industrial, Irrigation
			D-23N/3E-18E1	Little Butte Creek - Mosquito Creek	SW	NW	18	23N	4E	--	Domestic, Industrial, Irrigation
610-L	2/10/17	Elmer B. & V. Catharine Humphry	D-22N/3E-23E1	Clear Creek	NE	NE	23	22N	3E	May - Sept.	Irrigation
883-L	1/9/18	Bruce McIntosh	--	Unnamed Spring	SE	SE	14	29N	2W	5/1 - 10/1	Agricultural
1861-L	6/12/18	Howard A. Clough	--	Mill Creek	NE	NE	1	25N	2W	4/1 - 8/1	Irrigation
2754-L	2/9/22	Pacific Gas & Electric Company	D-30N/1W-27E1	North Fork Battle Creek	SE	SW	27	30N	1W	1/1 - 12/31	Power
2909-L	6/27/22	E. L. & Lou R. Adams	--	Butte Creek	NW	SE	5	21N	2E	4/1 - 6/15	Irrigation
3250-L	9/3/23	O. Kenneth Smith	--	Middle Butte Creek	SE	SE	34	23N	3E	1/1 - 12/31	Mining
3256-L	2/15/23	June M. Oubridge	D-32N/1E-8C1	Unnamed Stream	SE	NW	8	32N	1E	4/1 - 11/1	Irrigation
4989-L	4/7/26	R. E. & M. E. Franklin	--	West Branch Butte Creek	NE	NE	22	24N	3E	1/1 - 12/31	Mining
5109-L	7/17/26	M & T Incorporated	--	Butte Creek	NE	NE	4	21N	2E	4/1 - 11/1	Irrigation
5212-L	9/17/26	Dorothy Stover Hall & H. J. Stover	--	Rock Creek	NW	NW	23	23N	1E	6/1 - 9/30	Irrigation, Stockwatering
6171-L	1/28/29	Warner U. & Hulda R. Reichardt, et al.	--	Branch of Bushman Creek	SE	NE	22	22N	3E	5/1 - 10/1	Irrigation
7155-L	12/17/31	A. J. McPadden & Fred Percy	--	Unnamed Stream	NW	NW	9	29N	4E	5/1 - 11/1	Recreational
7156-L	12/17/31	U. S. Lassen National Park	--	Unnamed Spring	SW	NW	25	29N	3E	1/1 - 12/31	Domestic, Uses too numerous to list
7536-L	4/10/33	California Division of Highways	--	Unnamed Spring	NE	NE	34	29N	4E	1/1 - 12/31	Recreational
7818-L	1/19/34	Robert N. & Lana E. Erickson	D-23N/3E-5D1	Unnamed Springs	NW	NW	5	23N	3E	1/1 - 12/31	Domestic, Fire protection
8187-L	12/1/34	Parrott Investment Company	--	Butte Creek	NE	NE	4	21N	2E	1/1 - 12/31	Irrigation, Stockwatering
8188-L	12/1/34	M & T Incorporated	--	Butte Creek	NE	NE	4	21N	2E	1/1 - 12/31	Irrigation, Stockwatering
8469-L	10/11/35	U. S. Lassen National Forest	--	Lost Creek Spring	NW	NE	12	28N	5E	6/1 - 10/15	Recreational
8522-L	12/17/35	June M. Oubridge	D-32N/1E-8C1	Unnamed Stream	SE	NW	8	32N	1E	4/1 - 11/1	Irrigation
8971-L	5/13/37	G. H. Otney	--	Unnamed Spring	SE	NW	7	30N	4E	6/1 - 10/1	Domestic

* P - Indicates permit number of application approved.
L - Indicates license number of right confirmed.
N - Indicates number of water licenses issued as of above date.

** Indicates alternate points of diversion at which the amount listed under this application may be diverted.

**APPLICATIONS TO APPROPRIATE WATER IN
SACRAMENTO VALLEY NORTHEAST HYDROGRAPHIC UNIT**
(Filed with State Water Rights Board on January 20, 1965)

Application number and Status*	Date filed	Present owner	Diversion location number	Source	Location of point of diversion				Amount	Period of diversion	Purpose
					1/4	1/4	Sec	T			
9216-L	12/30/37	City of Chico	--	Big Chico Creek	SW	NE	26	22N	1E	5/7 - 8/1	Recreational
9381-L	8/16/38	California Division of Highways	--	Unnamed Spring	NW	NE	36	28N	5E	1/1 - 12/31	Domestic
9712-L	8/28/39	U. S. Lassen National Forest	D-29N/3E-24N1	Unnamed Spring	SW	NW	24	29N	3E	5/1 - 10/1	Domestic
			--	2 Unnamed Springs	SE	NE	23	29N	3E	5/1 - 10/31	Domestic
10735-L	11/24/43	Estate of D. C. Wilson	--	Mud Creek	SW	NW	18	24N	3E	5/1 - 11/1	Irrigation, Domestic
		A. P. & Naomi E. Streeter	--	Mud Creek	NW	NW	18	24N	3E	1/1 - 12/31	Domestic
10878-L	9/11/44	Edmund C & Virginia O. Parker	--	Merrill Creek	NW	NW	27	22N	3E	4/1 - 10/1	Irrigation, Uses too numerous to list
11538-L	9/6/46	John W. & Ola Null	D-30N/2E-16L1	Rock Creek	NE	SW	16	30N	2E	11/1-3/31	Recreational
11581-L	10/7/46	Warren Amaker	D-32N/3W-16D1	North Cow Creek	NW	NW	16	32N	3W	4/1 - 6/1	Irrigation
11912-L	5/29/42	Francis L. & Areatha R. Ricker	--	Unnamed Gulch	NE	NE	30	34N	1W	1/1 - 12/31	Domestic
			--	Unnamed Gulch	NE	SE	30	34N	1W	1/1 - 12/31	Domestic
12096-L	9/29/47	Hal T. & Bessie J. Hylton	D-28N/5E-10C1 & C2	Unnamed Spring	NW	NE	10	28N	5E	1/1 - 12/31	Power, Domestic
12291-L	2/3/48	Kenneth Peterson, et al.	--	North Cow Creek	NE	SW	9	32N	3W	4/1 - 7/1	Irrigation
12292-L	2/3/48	Gussie Gasperson	--	North Cow Creek	NE	SW	9	32N	3W	4/1 - 7/1	Irrigation, Stockwatering
12293-L	2/3/48	William A. Campbell, et al.	--	North Cow Creek	NE	SW	9	32N	3W	4/1 - 7/1	Irrigation
12294-L	2/3/48	Northoff Enterprises	--	North Cow Creek	NE	SW	9	32N	3W	4/1 - 7/1	Irrigation
12855-L	12/10/48	California Division of Forestry	--	Unnamed Spring	SE	NW	21	24N	3E	1/1 - 12/31	Domestic, Fire protection
13178-L	6/27/49	Pearl & Wilfred Hardy	--	Unnamed Spring	SE	NW	21	24N	3E	5/1 - 11/1	Domestic
13540-L	1/12/50	U. S. Fish & Wildlife Service	D-29N/2W-6L1	Battle Creek	SE	SE	31	30N	2W	1/1 - 12/31	Fish culture
			--	Battle Creek	NE	NE	6	29N	2W	1/1 - 12/31	Fish culture
13995-P	10/13/50	Pacific Gas & Electric Company	D-30N/1W-29A1	Darrah Creek	NE	NE	29	30N	1W	1/1 - 12/31	Power, Domestic
14270-L	4/24/51	Leonard & Elizabeth T. Andrade	--	Berry Creek	NW	SE	14	22N	3E	1/1 - 12/31	Industrial
14353-L	6/20/51	Ralph R. & Kathleen M. Edwards	--	Rock Creek	SE	NE	14	23N	1E	5/1 - 10/15	Irrigation, Stockwatering
14396-L	7/19/51	U. S. Lassen National Forest	D-29N/4E-34L1	2 Unnamed Springs	SE	NE	34	29N	4E	1/1 - 12/31	Domestic
			--	Unnamed Spring	NE	SW	34	29N	4E	1/1 - 12/31	Domestic

* P - Indicates permit number of application approved.

L - Indicates license number of right confirmed.

A - Neither permit nor license issued as of above date.

** Indicates alternate points of diversion at which the amount listed under this application may be diverted.

TABLE 5 (continued)

APPLICATIONS TO APPROPRIATE WATER IN
SACRAMENTO VALLEY NORTHEAST HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of January 20, 1965)

Application number and Status*	Date filed	Present owner	Diversion location number	Source	Location of point of diversion				Amount	Period of diversion	Purpose
					1/4	1/4	Sec	T			
14905-L	7/11/52	D. O. Myers	--	Sheridan Creek	SW	SW	20	31N	1W	5/1 - 10/15	Irrigation, Domestic
15559-P	9/29/53	John W. & Ola Null	D-30N/2E-16W	Rock Creek	SW	SE	16	30N	2E	11/1 - 3/31	Irrigation, Domestic, Recreational
15866-P	5/10/54	M & T Incorporated	--	Big Butte Creek	NE	NE	4	21N	2E	1/1 - 12/31	Irrigation, Stockwatering
15867-P	5/10/54	Parrott Investment Company	--	Big Butte Creek	NE	NE	4	21N	2E	1/1 - 12/31	Irrigation, Stockwatering
15933-L	6/29/54	Ernest Fink	D-28N/5E-26W	Lost Creek	SE	NW	26	28N	5E	1/1 - 12/31	Power
16223-L	1/31/55	John Wilhelm & Maria Leota Schleicher	--	Lost Creek	SW	NE	26	28N	5E	1/1 - 12/31	Domestic
16224-L	1/31/55	Charles T. & Margaret Neary	--	Lost Creek	SE	NE	26	28N	5E	4/1 - 12/1	Domestic
16238-P	2/15/55	Walter & Ada Albert; Herbert Reineke	D-28N/5E-36W	Deer Creek	NW	NE	36	28N	5E	1/1 - 12/31	Domestic
16276-L	3/14/55	Harold U. Linkins	--	Lost Creek	SE	NE	26	28N	5E	1/1 - 12/31	Domestic
16389-P	5/20/55	W. A. Richelieu, et al.	D-30N/2E-17W	Unnamed Stream	SE	SE	18	30N	2E	1/1 - 12/31	Irrigation, Domestic, Stockwatering
16760-L	11/30/55	Robert N. & Lena E. Erickson	D-23N/3E-5W	2 Unnamed Springs	NW	NW	5	23N	3E	5/1 - 10/1	Irrigation, Domestic, Fire protection
17522-L	3/22/57	Marion V. & Marie B. Allen	D-31N/1E-14W	South Fork Bear Creek	SW	SW	14	31N	1E	3/1 - 4/30	Recreational
17535-P	3/25/57	John P. & Mary E. Henning	D-24N/2E-25W	Unnamed Spring	SW	SE	25	24N	2E	4/1 - 10/31	Irrigation, Stockwatering
17862-L	10/25/57	U. S. Fish & Wildlife Service	--	Battle Creek	SE	SE	31	30N	2W	1/1 - 12/31	Fish culture
17906-L	12/6/57	Harold U. Linkins	D-29N/2W-6W	Battle Creek	NE	NE	6	29N	2W	1/1 - 12/31	Fish culture
18524-P	2/6/59	Laurence L. Furlong & George R. Hawkins	--	Unnamed Spring	NW	NE	26	28N	5E	1/1 - 12/31	Domestic
18626-L	4/6/59	Ray & Ora Oxelson	--	South Fork Bear Creek	SE	NE	13	31N	1E	10/1 - 5/15	Irrigation, Stockwatering
18780-L	6/9/59	Erna M. & Emma Rhoe Herron	--	Neebet Ravine	NE	NE	33	23N	3E	1/1 - 12/31	Domestic
18790-P	6/15/59	Paradise Recreation & Park District	D-22N/3E-23E	2 Unnamed Springs	SE	NW	30	22N	3E	1/1 - 12/31	Domestic
19292-A	3/8/60	Erich & Sophie Weller	D-28N/5E-36W	Barry Creek	SW	NE	23	22N	3E	1/1 - 12/31	Recreational
19380-P	4/25/60	California Division of Forestry	D-28N/1E-3W	Spring Tributary to Deer Creek	NW	NE	36	28N	5E	1/1 - 12/31	Power, Domestic
				Unnamed Spring	NW	SW	3	28N	1E	1/1 - 12/31	Irrigation, Domestic, Fire protection

* P - Indicates permit number of application approved.

L - Indicates license number of right confirmed.

A - Neither permit nor license issued as of above date.

** Indicates alternate points of diversion at which the amount

listed under this application may be diverted.

TABLE 5 (continued)

**APPLICATIONS TO APPROPRIATE WATER IN
SACRAMENTO VALLEY NORTHEAST HYDROGRAPHIC UNIT**
(Filed with State Water Rights Board on January 20, 1965)

Application number and Status*	Date filed	Present owner	Diversion location number	Source	Location of point of diversion				Amount	Period of diversion	Purpose	
					1/4	1/4	Sec	T				R
19697-P	8/22/60	U. S. Lassen National Forest	--	Payne Spring	NE	SE	23	28N	1E	1,200 gpd	1/1 - 12/31	Stockwatering, Fire protection, Wildlife propagation
19768-A	9/30/60	Walter & Ada Albert; Herbert Reineke	D-28N/5E-36B1	Tributary to Deer Creek	NW	NE	36	28N	5E	0.2 cfs	1/1 - 12/31	Power, Domestic
19981-P	2/10/61	Richard B. Scholes	D-33N/3W-32Q1	Unnamed Stream	SW	SE	32	33N	3W	50 af	12/1 - 5/30	Recreational
19982-P	2/10/61	Lloyd W. Barker	--	Unnamed Stream	SE	SW	32	33N	3W	10 af	12/1 - 5/30	Recreational
20050-A	3/24/61	California Division of Forestry	--	Mine Shaft	SW	NE	13	23N	3E	0.19 cfs	1/1 - 12/31	Irrigation, Domestic
20250-A	6/6/61	Ernest & Gertrude Pink	D-28N/5E-26N1	Unnamed Spring	NE	NW	35	28N	5E	8,000 gpd	1/1 - 12/31	Domestic
20260-P	6/13/61	Adolph J. & Bertha Mieke	--	Sunset Slough	NE	SW	28	26N	2W	0.4 cfs	4/1 - 10/15	Irrigation
20288-P	7/3/61	U. S. Fish & Wildlife Service	D-29N/2W-6A1	Battle Creek	NW	NE	6	29N	2W	30 cfs	1/1 - 12/31	Fish culture
20293-P	7/7/61	U. S. Lassen National Forest	D-29N/3E-24N1	Unnamed Spring	SW	NW	24	29N	3E	2,200 gpd	5/1 - 12/31	Domestic
			--	2 Unnamed Springs	SE	NE	23	29N	3E	**	5/1 - 12/31	Domestic
			--	2 Unnamed Springs	NE	SW	24	29N	3E	**	5/1 - 12/31	Domestic
20418-P	10/2/61	Frank M. & Mary A. Boone	--	Knaes Spring	SW	NE	32	28N	2E	2,500 gpd	1/1 - 12/31	Irrigation, Domestic, Stockwatering
20467-P	11/3/61	Mary & Frank M. Boone	--	Unnamed Stream	SW	NE	32	28N	2E	12 af	10/1 - 5/1	Irrigation, Uses too numerous to list
20510-P	11/28/61	James Thompson	--	Unnamed Stream	SE	NE	13	33N	2W	0.15 cfs	4/1 - 11/1	Irrigation
20538-P	12/20/61	Vernon F. & Wilma E. Shulte	D-29N/1E-29H1	Paynes Creek	SE	NE	29	29N	1E	27 af	1/1 - 4/1	Irrigation, Recreational
20547-P	1/3/62	The Overseoul Foundation	--	2 Unnamed Springs	SE	SW	18	22N	3E	1 cfs 10 af	1/1 - 12/31 10/1 - 5/1	Irrigation, Domestic, Recreational, Stockwatering
			--	2 Unnamed Springs	NE	NW	19	22N	3E	**	1/1 - 12/31 10/1 - 5/1	Irrigation, Domestic, Recreational, Stockwatering
			--	Unnamed Spring	NW	SW	19	22N	3E	**	1/1 - 12/31 10/1 - 5/1	Irrigation, Domestic, Recreational, Stockwatering
21177-P	3/6/63	Marion V. & Marie B. Allen	D-31N/1E-14N1	South Fork Bear Creek	SW	SW	14	31N	1E	6 af	11/1 - 5/1	Recreational
21584--	12/31/63	U. S. Lassen National Forest	--	Potato Spring	SW	SW	16	27N	4E	1,500 gpd	5/1 - 11/1	Domestic
21585--	12/31/63	U. S. Lassen National Forest	--	Pern Spring	NW	NE	10	28N	5E	0.056 cfs	5/1 - 11/1	Domestic
21933--	10/9/64	Charles T. & Margaret Neary	--	Unnamed Spring	SW	NW	25	28N	5E	1,900 gpd	12/1 - 4/1	Domestic

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L - Indicates license number of right confirmed.

A - Neither permit nor license issued as of above date.

** Indicates alternate points of diversion at which the amount listed under this application may be diverted.

TABLE 6
INDEX TO SURFACE WATER DIVERSIONS

Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Abbott, A. G.	See Abbott-Jones Ditch			
Abbott-Jones Ditch Abbott, A. G. Farrell, Virgil Hunt, W. H., Estate Co. Jones, Ellis and Jess	D-31N/1W-6N1	Cow Creek Shasta	26, 80	4
Albert, Walter	D-28N/5E-36B1	Deer Creek Tehama	36, 48, 49	86
Albrici, Louis*	See Williams, Maxine T.			
Aldredge, W. B.	D-31N/1E-18A1	Cow Creek Shasta	25, 80	34
Allen, M. V. and M. B.	D-31N/1E-15J1	Cow Creek	25, 80	26
	-15R1	Cow Creek Shasta	25, 80	26
	See also Allen's Reservoir			
Allen's Reservoir Allen, M. V. and M. B.	D-31N/1E-14N1	Cow Creek Shasta	25, 48, 49	36
Alpaugh Ditch Strawn, Merrick and Robert	D-33N/1W-19J1	Cow Creek Shasta	32, 84	22
Ameker, Warren	D-32N/3W-16D1	Cow Creek Shasta	30, 47, 82	20
Anderson, John	See Crooker Ditch			
Anderson, C. E.	D-22N/3E-5P1	Butte Creek Butte	20, 77	112
Anderson, Mrs. Roy C.	See Kennedy Pipe			
Antelope Creek Dam Red Bluff, City of	D-27N/2W-9G1	Antelope Creek Tehama	12, 13	74
Archer, George W.	See Williams Ditch			
Armstrong, Boyd	D-31N/2E-26D1	Battle Creek	18, 76	38
	-26D2	Battle Creek	18, 76	38
	-27H1	Battle Creek Shasta	18, 76	38
Armstrong, Eva L.	See Huester Ditch and Null-Armstrong Ditch			
Armstrong, Lucille	See Mill Ditch			
Arnett, Jesse R.	See Sheridan Ditch			
Asbury Pump Pacific Gas and Electric Co.	D-30N/1W-29C1	Battle Creek Shasta	40, 74, 79	44

* Obtained ownership subsequent to survey.

TABLE 6 (continued)

INDEX TO SURFACE WATER DIVERSIONS

Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Atkins-Koehler Ditch Hufford, J., Sr. Koehler, Rod Parker, A. C. Welsh, Dennis	D-32N/1W-16R1	Cow Creek Shasta	29, 82	24
Atkins, L. B.	D-32N/1E-7K1 -7K2	Cow Creek Cow Creek Shasta	27, 81 27, 81	24 24
	See also Brown and Grover Ditch			
Bagley, Alice J.	See Lucas, Clara M.			
Bargsten, Ernest	See Basset Ditch			
Barnham, D. H.	See Mill Ditch			
Barron, Bruce	D-30N/1E-16D1	Battle Creek Shasta	15, 74	46
Bascom, W. S.	See Rose Briar Ditch			
Basset Ditch Crowe, John Bargsten, Ernest Hufford, J., Sr. Welsh, Dennis	D-32N/1W-20E1	Cow Creek Shasta	30, 82	32
Beresford, H. K.	See United States Lassen Volcanic National Park			
Bergin Ditch Forward Brothers	D-30N/2E-26B2	Battle Creek Tehama	16, 45, 75	50
Bethard Ditch Stewart, R. W. and V. J.	D-21N/3E-2G1	Butte Creek Butte	19, 77	118
Bibbens, Earl	D-31N/3E-29N1 -29Q1 -32B1	Battle Creek Battle Creek Battle Creek Shasta	18, 76 18, 76 19, 76	38 38 38
Bibbens, Ray	D-33N/1W-13E1 -13E2	Cow Creek Cow Creek Shasta	32, 83 32, 83	24 24
Bidwell Ditch Truman, J. C.	D-34N/1W-13N1	Cow Creek Shasta	12, 35, 85	16
Binard, J. E.	See Brown and Grover Ditch			
Blodgett Domestic Ditch Blodgett, Emory and Ruby	D-31N/2E-2G1	Battle Creek Shasta	17, 75	38
Blodgett, Emory and Ruby	D-30N/1E-21H1 D-30N/1W-1Q1	Battle Creek Cow Creek Shasta	15, 74 24, 79	48 46
	See also Blodgett Domestic Ditch. Null-Armstrong Ditch and Null Garden Ditch			

TABLE 6 (continued)
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Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Bluff Spring Ditch Hoy, John Hult, John L. Tate, G. W. Weiner	D-20N/1E-1F1	Battle Creek Tehama	13, 72	48
Blum, A. M. and R. E.	D-21N/3E-1A1 -1B1	Butte Creek Butte Creek Butte	14, 76 19, 77	118 118
Bogue, H. E.	D-32N/1W-15R1	Cow Creek Shasta	29, 82	34
Bonde Ditch Cason, E. A. and Lindsay, Charles Priddy, Dean	D-33N/1E-20A1	Cow Creek Shasta	31, 83	24
Boole Ditch Boole Ditch Water Users' Association	D-30N/2E-21P1	Battle Creek Tehama	16, 45, 75	48
Bouten-Meezer Ditch Keck, Al Walker, Leatha J.	D-30N/1E-21L1	Battle Creek Tehama	15, 74	48
Braby, William A.	See Pehrson-Grant-Jones Ditch			
Bramlett, Tommy	See Digger Creek Feeder			
Brewer, Lowell*	See Brown and Grover Ditch			
Brovan, Charles	D-31N/1E-20Q1 -21M1	Cow Creek Cow Creek Shasta	25, 80 25, 80	34 36
Brown and Grover Ditch Atkins, L. E. Binard, J. L. Dorset, J. Gilbert, Mrs. M. R. Kelsh, Dennis	D-32N/1E-7M1	Cow Creek Shasta	27, 81	24
Brush Creek-Grace Lake Canal Pacific Gas and Electric Co.	D-30N/1E-9Q1	Battle Creek Shasta	39, 73	48
Butte Canal Pacific Gas and Electric Co.	D-25N/3E-36F1	Butte Creek Butte	42, 44	108
Cahoon, D. M.	D-33N/2W-26Q1	Cow Creek Shasta	34, 84	22
	See also Winters Ditch			
California State Dept. of Fish and Game	D-28N/1E-4F1	Paynes Creek Tehama	38, 86	62
	See also Darrah Springs Fish Hatchery			

* Obtained ownership subsequent to survey.

TABLE 6 (continued)
INDEX TO SURFACE WATER DIVERSIONS

Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
California State Dept. of Natural Resources Division of Forestry	D-28N/1E-3M1	Paynes Creek Tehama	38, 48	62
California State Dept. of Public Works Division of Highways	D-29N/3E-24M1	Battle Creek Tehama	13, 47, 49	66
Calwallader, R. E. and Elaine	See Statham, E. H. and Ruth			
Campbell Ditch Forward Brothers	D-30N/2E-26B1	Battle Creek Shasta	16, 45, 75	50
Canyon Creek Canal	See North Canyon Creek Canal and South Canyon Creek Canal			
Carter*	See Atkins-Koehler Ditch			
Casey, A. B.*	See Barron, Bruce			
Cason, E. A. and Lindsay, Charles	See Bonde Ditch			
Cedar Hills Mining and Manufacturing Co.	See Gaumers Ditch			
Centerville Canal Pacific Gas and Electric Co.	D-23N/3E-10E1	Butte Creek Butte	41, 44, 77	112
Chase Mill Ditch Thatcher, Wallace A.	D-31N/2E-4B1	Cow Creek Shasta	26, 80	36
Childs, Coyle C. and Woodward, Bernal	D-29N/1E-20H1	Battle Creek Tehama	13, 73	60
Clay, Dale	See Crooker Ditch			
Clear Creek Diversion Pacific Gas and Electric Co.	D-24N/3E-12Q1	Butte Creek Butte	41	108
Cleland, Elizabeth	See Crooker Ditch			
Coffman, J. W.	D-33N/1W-6K1	Cow Creek Shasta	32, 83	22
Coker, George	D-33N/1W-4K2	Cow Creek Shasta	32, 83	24
Colbert, Louis	D-34N/1E-18K1 -19A1	Cow Creek Cow Creek Shasta	12, 35, 85 35, 85	16 16
Coleman Canal Pacific Gas and Electric Co.	D-29N/1W-3D1	Battle Creek Tehama	39, 74, 79	46
Coleman Fish Hatchery United States Dept. of the Interior	D-29N/2W-6A1	Battle Creek Shasta	12, 14, 47, 48, 49, 74	44
Cook and Butcher Ditch Meyer, Donald E. (other users outside of hydrographic unit)	D-32N/3W-9L1	Cow Creek Shasta	12, 30, 82	20

* Obtained ownership subsequent to survey.

TABLE 6 (continued)
INDEX TO SURFACE WATER DIVERSIONS

Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Cooke, Charles E.	D-21N/3E-12J1 -12Q1	Butte Creek Butte Creek Butte	14, 77 44, 77	118 118
Copeland, Dr. Edward	See Seaman, Mrs. Jean Mickey			
Corradetti, Richard	See Loomis Ditch			
Covey, D. N. and Merle Donahue, Dr. Paul	D-32N/1W-24F1	Cow Creek Shasta	30, 82	34
Crooker Ditch Clay, Dale Anderson, John Cleland, Elizabeth Diehl, Roy M. and Mary A. Elder, Stanley Manton School George. Troy Robbins, Samuel O'Shea, Lou Potter, Clifford	D-30N/1E-23L1	Battle Creek Tehama	15, 45, 74	48
Cross Country Ditch Pacific Gas and Electric Co.	D-30N/1E-16B2	Battle Creek Shasta	40, 73	48
Crowe, John	D-31N/2W-4E1	Cow Creek	26, 80	32
	D-32N/2W-26N1	Cow Creek Shasta	30, 82	32
	See also Basset Ditch			
Cummins, Bill *	See Rimrock Ranch			
Cunningham Ditch Taylor, Esther	D-33N/1W-24G1	Cow Creek Shasta	33, 84	24
Cunningham Spring Taylor, Esther	D-33N/1W-24D1	Cow Creek Shasta	33, 84	24
Cussick, James McGann	See McGann Estate			
Cussick, John, Estate	D-26N/4E-29H1	Butte Creek Butte	22	96
	See also Roper Ditch and McGann Estate			
Cussick, Leo H.	See McGann Estate			
Dale, Walter	D-29N/2W-34R1	Paynes Creek	38, 87	58
	-35J1	Paynes Creek	38, 87	58
	-35N1	Paynes Creek	38	58
	-35N2	Paynes Creek Tehama	38, 87	58
Dargatz, Leo H.	D-32N/1E-5K1	Cow Creek Shasta	27, 81	24

* Obtained ownership subsequent to survey.

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Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Darrah Springs Fish Hatchery California State Dept. of Fish and Game	D-30N/1W-20Q1 -20R1	Battle Creek Battle Creek Shasta	17 17	46 46
Davison, Mrs.	D-28N/2E-31R1	Antelope Creek Tehama	13, 73	78
Dawson, Hal	D-21N/4E-6F1	Butte Creek Butte	12, 19, 77	118
Deer Creek Irrigation District	D-25N/1W-23D1	Deer Creek Tehama	12, 36	90
Diamond International Corp.	See Diamond National Corp.			
Diamond National Corp.	D-24N/3E-24K1	Butte Creek Butte	21, 77	108
	D-26N/4E-20F1	Chico Creek	23	96
	D-26N/4E-20M1	Chico Creek	24	96
	D-28N/2E-5P1	Antelope Creek	13, 73, 86	62
	D-29N/3E-29L1	Battle Creek Tehama	14	64
	See also Lyman Spring			
Diehl, Roy M. and Mary A.	See Crooker Ditch			
Digger Creek Feeder Pacific Gas and Electric Co. Williams, Elizabeth Bramlett, Tommy	D-30N/1E-22E1	Battle Creek Tehama	40, 73, 74	48
Donahue, Dr. Paul	See Covey, D. N. and Merle			
Dorset, Ed	See Brown and Grover Ditch			
Duensing, L. H.	D-24N/3E-36D1 -36F1	Butte Creek Butte Creek Butte	21, 44, 78 21, 78	108 108
Eagle Canyon Ditch Pacific Gas and Electric Co.	D-30N/1W-25K1	Battle Creek Tehama	40, 75	46
Edwards, Ross	D-31N/1E-30C1	Cow Creek Shasta	25, 80	34
Eight-Mile Ditch Faber, Darrell Morelli, Mrs. Virginia	D-32N/2E-30D1	Cow Creek Shasta	28, 81	36
Elder, Stanley	See Crooker Ditch			
Erickson, Dr. Robert N.	D-23N/3E-5D1	Chico Creek Butte	23, 46, 48, 79	106
Estep Ditch Lawrence Miller	D-33N/2W-25A3	Cow Creek Shasta	34, 84	22
Evers, H. K.	See Todd Ditch			

TABLE 6 (continued)

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Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Faber, Darrell	D-32N/1E-26J1 -26K1 -26L1	Cow Creek Cow Creek Cow Creek Shasta	28, 81 28, 81 28, 81	 36 36
	See also Eight-Mile Ditch			
Farnsworth Ditch Jack Pine	D-31N/2E-2N1	Battle Creek Shasta	17, 75	38
Farrell, Virgil	See Abbott-Jones Ditch			
Field, J. W., M.D.	D-32N/3E-14M1	Butte Creek Butte	20, 77	116
Fillmore, F. W. Frey, R. G., M.D. Tupman, W. H.	D-24N/2W-6A2	Battle Creek Tehama	12, 15	44
Fink, Ernest	D-28N/5E-26F1 -26N1	Deer Creek Deer Creek Tehama	36, 48 36, 49	68 68
Forward Brothers	See Bergin Ditch, Campbell Ditch, Love's Mill Branch, Mill Ditch and Randall Ditch			
Frey, R. G., M.D.	See Fillmore, F. W.			
Garnier Ditch La Tieze, Marce and Leslie Gulart, F. J. Richelieu, M. A.	D-30N/2E-17L1	Battle Creek Shasta	16, 48, 75	48
Gaumers Ditch Cedar Hills Mining and Manufacturing Co.	D-21N/3E-1A2	Butte Creek Butte	19, 76	118
George, Troy	See Crooker Ditch			
German Ditch South Cow Creek Ditch Co.	D-34N/1E-23R1	Cow Creek Shasta	28, 81	36
Gilbert, Mrs. R. F.	See Brown and Grover Ditch			
Gillan, W. L. and T. M.	See Pehrson-Brant-Jones Ditch			
Greenwald, Dan	D-34N/1W-27A1	Cow Creek Shasta	36, 85	16
Grindly, Warren K.	D-32N/1E-10C1	Cow Creek Shasta	27, 81	26
Grindly, Warren K. Williams, Wallace B.	D-33N/1E-27M1	Cow Creek Shasta	32, 83	26
	See also Old McGumble Ditch			

TABLE 6 (continued)

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Diversion name or owner	Diversion location	Subunit and County	Page references	
			Volume I	Volume II
Gritsch, Joseph A.	See Harper Ditch Hunt Ditch, Mill Ditch and Slaughter Pole Ditch			
Gulart, F. G.	See Garnier Ditch			
Guttmar Ditch Van Blair, C. W. Whitney, R. B.	D-33N/1E-21A1	Cow Creek Shasta	31, 83	26
Hagaman Gulch Diversion Morelli, Mrs. Virginia	D-32N/1E-27E1	Cow Creek Shasta	28, 81	36
Hale, Harriet G.	See Starkweather, Robert G.			
Hanna, Mrs. R. W.	D-29N/4E-2L1 -11L1 -11L2 -11L3 -11M1 -11M2 -11P1 -14C1	Mill Creek Mill Creek Mill Creek Mill Creek Mill Creek Mill Creek Mill Creek Mill Creek Tehama	37, 86 37, 86 37, 86 37, 86 37, 86 37, 86 37, 86 37, 86	52 52 52 52 52 52 52 52
Harper Ditch Gritsch, Joseph A.	D-32N/1W-2Q1	Cow Creek Shasta	29	24
Harrison Ditch Taylor, Lloyd R. Hennessy, Mrs. Anna C.	D-30N/1E-23E1	Battle Creek Tehama	15, 45, 74	48
Hartman, Henry H. Staiger, J. D.	D-32N/1W-35F1	Cow Creek Shasta	30, 82	34
Haws, Marius G.	D-32N/1E-13R1	Cow Creek Shasta	27, 81	36
Hendricks Canal Pacific Gas and Electric Co.	D-24N/4E-31M1	Butte Creek Butte	12, 42	108
Hennessy, Mrs. Anna C.	See Harrison Ditch			
Henning, John F.	D-23N/2E-2J1 D-24N/2E-25Q1 -36B1 -36R1	Chico Creek Chico Creek Chico Creek Chico Creek Butte	23, 79 23, 48, 79 23, 79 23, 79	106 106 106 106
Hildebrand, Clifton	See Rimrock Ranch			
Hill, C. V.	See Loomis Ditch			
Hootman, Fred	D-31N/2E-24P1 -26A1	Battle Creek Battle Creek Shasta	18, 76 18, 76	38 38
Housman, L. L.	D-27N/2E-23D1	Mill Creek Tehama	37, 86	80

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Hoy, John	See Bluff Spring Ditch			
Huester Ditch Armstrong, Eva L.	D-32N/2E-36L1	Battle Creek Shasta	19, 76	38
Hufford, Elmer	D-32N/1W-35F2 See also Knight, Remi C.	Cow Creek Shasta	30, 82	34
Hufford, J., Sr.	See Atkins-Koehler Ditch and Basset Ditch			
Hult, John E.	See Bluff Spring Ditch			
Humphry, Elmer B.	D-22N/3E-23B1	Butte Creek Butte	20, 46, 77	114
Hunceker Ditch Miles, Billy Jean Thompson, Donald E., M.D.	D-30N/2E-17J1	Battle Creek Shasta	16, 75	48
Hunt Ditch Gritsch, Joseph A.	D-32N/1W-11C1	Cow Creek Shasta	29, 82	24
Hunt, W. H., Estate Co.	D-31N/2W-10P1 See also Abbott-Jones Ditch	Cow Creek Shasta	27, 81	32
Hushing, S. K.*	See Gaumers Ditch			
Hylton, Hal T. and Bessie J.	D-28N/5E-10C1 -10C2	Deer Creek Deer Creek Tehama	36, 47 36, 47	68 68
Inskip Ditch Pacific Gas and Electric Co.	D-29N/1E-5K1	Battle Creek Tehama	39, 73, 74	46
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Kilarc Main Canal Pacific Gas and Electric Co.	D-33N/1E-25G1	Cow Creek Shasta	43	26
King Ditch Truman, J. C.	D-34N/1W-24C1	Cow Creek Shasta	35, 85	16
Kinne, C. H.	D-23N/3E-31C1	Chico Creek Butte	23, 79	112
Kirkendahl Ditch Paulsen, R. L.	D-33N/1W-19L1	Cow Creek Shasta	33, 84	22
Klassen, Henry	See Sheridan Ditch			
Knight, Remi C. Hufford, Elmer	D-32N/2E-5Q1	Cow Creek	28, 81	26
	-8D1	Cow Creek Shasta	28, 81	26
Koehler, Rod	D-32N/1W-15L1	Cow Creek Shasta	29, 82	24
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Lansing, Dean	D-32N/1W-36A1	Cow Creek	30, 82	34
	-36A2	Cow Creek Shasta	30, 82	34
La Tieze, Marcel and Leslie	See Garnier Ditch			
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	-3Q1	Battle Creek Tehama	14, 74	46
Loomis Ditch Corradetti, Richard Hill, C. V.	D-31N/3E-30A1	Battle Creek Shasta	18, 76	38
Love's Mill Branch Forward Brothers	D-30N/2E-27A1	Battle Creek Tehama	17, 45, 75	50
Lovelett, H. P.	D-31N/1E-30C2	Cow Creek Shasta	25, 80	34
Lower Mill Creek Canal Pacific Gas and Electric Co.	D-30N/1E-3C1	Battle Creek Shasta	39	48
Lucas-Jones Diversion Smith, John H. Johnson, Helen Metcalf, Mabel Smith, Mildred R.	D-26N/4E-13D1	Butte Creek Butte	21, 44, 78	98

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	-22D1	Butte Creek Butte	22, 44, 78	96
Lyman Spring Diamond National Corp.	D-28N/2E-5J1	Antelope Creek Tehama	13	62
MacCumber Reservoir Pacific Gas and Electric Co.	D-31N/2E-15H1	Battle Creek Shasta	40	38
Magalia Reservoir Paradise Irrigation District	D-23N/3E-25R1	Butte Creek Butte	21, 44, 48, 77	114
Manning, G. C.	D-30N/1E-8N1	Battle Creek Shasta	11, 74	46
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Marian, Ralph	D-28N/1E-2H1	Paynes Creek Tehama	37, 86	62
Maxwell Ditch Nye, Henry	D-33N/1E-14E1	Cow Creek Shasta	31, 83	24
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	-20F2	Butte Creek Butte	20, 44, 77	116
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	-28B1	Butte Creek Butte	22, 44, 78	96
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Mill Creek-South Cow Creek Canal Pacific Gas and Electric Co.	D-32N/1W-28Q1	Cow Creek Shasta	42	34
Mill Ditch Armstrong, Lucille Barnham, D. H. Gritsch, Joseph A. Junge, Walter Staheli, Grace, et al.	D-33N/1E-20G1	Cow Creek Shasta	8, 31, 83	24
Mill Ditch Forward Brothers	D-30N/2E-24Q1	Battle Creek Tehama	16, 45	50
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Miller, Lawrence	D-33N/2W-25B1 See also Estep Ditch	Cow Creek Shasta	34, 84	22
Miller, Robert	D-34N/1E-20B1	Cow Creek Shasta	12, 35, 85	16
Millseat Diversion Pacific Gas and Electric Co.	D-30N/1E-16B1	Battle Creek Shasta	39, 73	48
Millville Ditch Millville Ditch Co.	D-31N/2W-6F1	Cow Creek Shasta	12, 27, 81	30
Mindermann, Mrs. Charlotte	See Mickey-Mindermann Ditch and Seaman, Mrs. Jean Mickey			
Mirror Lake Scholes, Richard B.	D-33N/3W-32Q1	Cow Creek Shasta	34, 49	20
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Murfey, Spencer	See Sheridan Ditch			
Murphy, R. M., Jr.	D-33N/1E-23R1	Cow Creek Shasta	31, 83	26

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	-31L1	Cow Creek	33, 84	22
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Murphy Slough Ditch Van Osdel, Walter J.	D-33N/2W-25A1	Cow Creek Shasta	34, 84	22
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Neely, L. C.	D-32N/1E-9H1	Cow Creek	27, 81	26
	-17C1	Cow Creek	27, 81	24
	-17J1	Cow Creek	28, 81	24
		Shasta		
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North Battle Creek Reservoir Pacific Gas and Electric Co.	D-32N/3E-20R1	Battle Creek Shasta	41	38
North Canyon Creek Canal Pacific Gas and Electric Co.	D-33N/1E-24N1	Cow Creek Shasta	43	26
Null-Armstrong Ditch Blodgett, Emory and Ruby Armstrong, Eva	D-31N/2E-2H1	Battle Creek Shasta	17, 75	38
Null Garden Ditch Blodgett, Emory and Ruby	D-31N/2E-2H2	Battle Creek Shasta	17, 75	38
Null, John	D-30N/2E-16L1	Battle Creek	16, 47	46
	-16Q1	Battle Creek	16, 48	48
	-16Q2	Battle Creek	16, 75	48
	-16Q3	Battle Creek	16, 75	48
		Shasta		
Nunes, Joe Nunes, Julia Nunes, Minnie	D-31N/2E-14K1	Battle Creek	17, 75	38
	-14M1	Battle Creek	18, 76	38
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Nye, Henry	See Maxwell Ditch			
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Owbridge, June M.	D-32N/1E-8C1	Cow Creek Shasta	27, 44, 81	24

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Pine, Jack	D-31N/2E-2P1 See also Farnsworth Ditch	Battle Creek Shasta	17, 75	38
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	-4K1	Cow Creek Shasta	32, 83	24
Sanders, George	D-33N/1W-5P1	Cow Creek Shasta	32, 83	22
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^a Hildebrand part owner of diversion D-28N/1W-4A1 only.

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Taylor, S. E.	See Sheridan Ditch			
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Thatcher, Wallace A.	D-31N/2E-3E1	Cow Creek	26, 80	38
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Worden, Gilbert*	See Haws, Marian G.			
Worley Ditch Schumacher, Betty, et al.	D-33N/1E-16N1	Cow Creek Shasta	31, 83	26
Worst *	See Brown and Grover Ditch			
Wright, Edmund D.	D-29N/2E-6R1	Battle Creek Tehama	13, 73	48
Wright, Glenn	D-30N/2E-2E1 -3H1	Battle Creek Battle Creek Shasta	15, 74 15, 74	50 50
	See also Test Meadow Diversion			
Yordy Upper Ditch Yordy, L. A.	D-33N/1W-22F2	Cow Creek Shasta	33, 84	24
Zamboni Lumber Co.	D-34N/1E-29F1	Cow Creek Shasta	35	16

* Obtained ownership subsequent to survey

CHAPTER III. LAND USE

This chapter presents the results of the survey of land use in the Sacramento Valley Northeast Hydrographic Unit in 1962. The status of land use at this time serves as a base for projections of future land use patterns by which future water requirements will be determined. The methods and procedures followed in the survey and in processing the data, as well as the various categories of land use, are described in Appendix A. The results of the survey are summarized in Table 7, "Land Use".

During the survey, each irrigated parcel was identified with its particular water supply, either ground water or one of the surface water diversions described in Chapter II. From this information the acreage of each crop and of fallow or idle land associated with each supply was determined. These acreages are given in Table 8, "Irrigated Lands".

Maps showing the land use delineations made during the survey and a legend of land use symbols are presented in Volume II.

TABLE 7
LAND USE
(1962, in acres)

Subunit and County	Irrigated lands	Naturally high water table lands		Dry-farmed lands	Urban lands	Recreational lands			
		Meadowlands	Marsh			Residential	Commercial	Compsites	Parks
Antelope Creek Tehama	152	69	0	0	16 ^a	0	0	12	0
Battle Creek Shasta	1,753	151	7	218	148 ^b	141	14	55	10,178
Tehama	1,875	492	0	96	76 ^b	181	13	40	747
Total	3,628	643	7	314	224 ^b	322	27	74	10,925
Butte Creek Butte	754	282	0	132	5,73 ^c	214	17	26	0
Plumas	0	1	0	0	0	0	0	0	0
Tehama	0	32	0	0	3	20	0	8	0
Total	754	315	0	132	5,742	234	17	34	3
Campbell Mound Butte	0	0	0	8	43	0	0	0	0
Chico Creek Butte	0	0	0	14	27	0	23	0	1,188
Tehama	0	67	0	0	0	0	0	36	0
Total	0	67	0	14	27	0	23	36	1,188
Cow Creek Shasta	7,892	531	27	717	177 ^c	0	3	32	0
Deer Creek Tehama	0	1,520	0	0	0	24	15	66	0
Mill Creek Shasta	0	0	0	0	0	0	0	0	3,315
Tehama	279	476	11	0	0	75	12	54	3,347
Total	279	476	11	0	0	75	12	54	6,662
Paynes Creek Tehama	429	2	10	345	73	10	0	2	0
SUMMARY:									
Butte County	840	282	0	154	5,800	214	40	26	1,188
Plumas County	0	1	0	0	0	0	0	0	0
Shasta County	9,645	682	34	735	325	141	17	67	13,343
Tehama County	2,731	2,058	27	453	108	316	43	218	4,047
TOTAL	13,216	3,623	61	1,342	6,302 ^d	671	100	311	18,678

a - Includes 1 acre of cemetery.

b - Includes 5 acres of cemetery.

c - Includes 2 acres of cemetery.

d - Includes 8 acres of cemetery.

TABLE 8
IRRIGATED LANDS
(1962, in acres)

Diversion or other sources serving irrigated lands		Pasture			Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous	
ANTELOPE CREEK SUBUNIT												
<u>NDB&M</u>												
D-28N/2E-3H1	John C. Turner			78	10							88
D-28N/2E-3L1	John C. Turner			23								23
D-28N/2E-5P1 ^d	Diamond National Corp.			7	1							8
D-28N/2E-5P2	Jonathan S. and Ruth Thatcher			12								12
D-28N/2E-3iR1	Mrs. Davison			21 ^a								21 ^a
Surface Water: Full Irrigation		0	0	120	11	0	0	0	0	0	0	131
Partial Irrigation		0	0	21	0	0	0	0	0	0	0	21
TOTAL (Tehama County Only)		0	0	141	11	0	0	0	0	0	0	152
BATTLE CREEK SUBUNIT												
D-29N/1E-1F1	Bluff Spring Ditch	17	27	17	17		2					85
D-29N/1E-5K1	Inskip Ditch											17
D-29N/2E-18E1	So. Battle Creek Canal			24								24
D-29N/1E-12D1	Soap Creek Feeder											
D-30N/1E-4Q1	Brush Cr-Grace L. Canal											
-15E1	No. Battle Cr. Feeder											
-16E1	Millseat Division											
-16E2	Cross Country Ditch											
-22E1	Digger Creek Feeder											
-33Q1	Upper Ripley Feeder											
D-29N/1E-20H1	Coyle C. Childs Bernal Woodward	20				13						33
D-29N/2E-6R1	Edmund D. Wright			61 ^b	9 ^a							70 ^b
D-29N/3E-25H1	Robert G. Starkweather et al.			27	32 ^c							356
-25H2												
-25K1												
D-29N/4E-30A1	Robert G. Starkweather et al.				452							452

For lettered footnotes, see last page of table.

TABLE B (continued)
IRRIGATED LANDS
(1962, in acres)

Diversions or other sources serving irrigated lands		Pasture			Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous	
BATTLE CREEK SUBUNIT (Continued)												
<u>MDR&W</u>												
D-24N/LA-34L	Inskip Ditch				15							15
D-24N/LA-1B1	Ripley Cr. Feeder											
D-24N/LA-3C1	Grover C. Long			103								103
D-24N/LA-3D1 ^K	Coleman Canal				12							12
D-30N/LA-27PL	Wildcat Ditch											
D-24L	Pacific Power Ditch											
D-24N/LA-3D1 ^K	Coleman Canal			70 ^b	145 ^t	32						315 ^b
D-30N/LA-27PL	Wildcat Ditch											
D-29AL	Pacific Power Ditch											
D-24C1	Astury Pump											
D-24N/LA-34L	Grover C. Long		97 ^b	2	8 ^a							107 ^b
D-24N/2W-6A1	Coleman Fish Hatchery			12								12
D-30N/LE-8N1	G. C. Manning				4							4
D-30N/LE-16D1	Bruce Barron	22	15									37
D-30N/LE-21H1	Emery and Ruby Blodgett			35 ^b								35 ^b
D-30N/LE-21L1	Beuten-Meeker Ditch			17		11						28 ^b
D-30N/LE-22E1	Digger Creek Feeder			3								3
D-24H/LE-23E1	Harrison Ditch			25 ^b								25 ^b
D-30N/LE-23L1	Crooker Ditch		18	47							1	66
D-24N/LE-30U1	Rice-Bower Ditch			68								68
D-30N/2E-2E1	Glenn Wright				1							1
D-30N/2E-3H1	Glenn Wright				3							3
D-30N/2E-34L	Test Meadow Diversion				1 ^a							1 ^a

For lettered footnotes, see last page of table.

TABLE 8 (continued)
IRRIGATED LANDS
(1962, in acres)

Division or other sources serving irrigated lands		Posture				Orchard and Vineyard				Truck		Total Irrigated	Irrigated Idle or fallow	Total
Division Location	Division Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous			
BATTLE CREEK SUBUNIT (Continued)														
<u>MDBBM</u> D-30N/2E-16Q2	John Null				10							10		10 ^a
D-30N/2E-16Q3	John Null				17		3					20		20
D-30N/2E-17J1	Huncker Ditch			33								33		33
D-30N/2E-17L1	Garnier Ditch			34								34	21	55
D-30N/2E-19L1	Williams Ditch			4			16					20	3	23
D-30N/2E-21P1	Reole Ditch	12 ^c	17	51 ^b			10 ^b		10			10 ^b	6	115 ^b
D-30N/2E-26B1	Campbell Ditch		35	103 ^b								138 ^b		138 ^b
D-30N/2E-26B2	Bergin Ditch						14					14		14
D-30N/2E-26B3	Franklin Ditch		6									6		6
D-30N/2E-27A1	Love's Mill Branch												67	67
D-30N/2E-27C1	T. J. Pritchard Ditch		15		100 ^c							115		115
D-30N/2E-27D1	H. H. Pritchard Ditch			5								5		5
D-30N/2E-28K1	Eagle Canyon Ditch				8							8		8
D-30N/2E-29J1	Guy S. Jaffe at		113 ^b									113 ^b		113 ^b
D-30N/2E-29J1	Bridgett Domestic Ditch				7							7		7
D-30N/2E-29J1	Null-Kristina Ditch				15 ^b							15 ^b		15 ^b
D-30N/2E-29J1	Null Garden Ditch				37							37		37
D-30N/2E-29J1	Farnsworth Ditch				21							21		21
D-30N/2E-29J1	Jack Pine				35 ^a							35 ^a		35 ^a
D-30N/2E-29J1	Julia, Marie, and Joe Nunez				24 ^a							24 ^a		24 ^a

For lettered footnotes, see last page of table.

TABLE 8 (continued)
IRRIGATED LANDS
(1962, in acres)

Division or other sources serving irrigated lands		Pasture				Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total
Division Location	Division Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery			
BATTLE CREEK SUBUNIT (Continued)													
D-31N/31-14M-NE 1/4	Calle, Marie, and J. Dyer				14							14	14
D-31N/31-24P1	For: H. Egan				14							14	14
D-31N/31-24P1	Frank Scharsch, et al.				76							76	76
D-31N/31-24C	Frank Scharsch, et al.				107							107	107
D-21N/31-24B2	Frank Scharsch, et al.				7							7	7
D-31N/31-24C1	Frei Holman				76							76	76
D-31N/31-24C1	Boys Armstrong				26							26	26
D-31N/31-27D	R. J. Armstrong												
D-31N/31-27H1	Boys Armstrong												
D-31N/31-27H1	Earl Bibbens				13							13	13
D-31N/31-27H1	Earl Bibbens				14							14	14
D-31N/31-31H1	Lennis Ditch				144							144	144
D-31N/31-32B1	Earl Bibbens				34							34	34
D-21N/21-37L1	Huester Ditch				46							46	46
Surface Water: Full Irrigation		71	26	76	4, 41	54		22	1		1	3, 47	3, 62
Partial Irrigation		58	42	4	4	4		3	1		3	3	30
TOTAL		71	343	744	4, 46	56		22	1		1	4, 54	3, 62
Ground Water		9	0	40	1 ^e							41	41
Subunit Total		71	343	784	4, 46	56		22	1		1	3, 47	3, 62
Shasta County		22	71	243	1, 23	32		3	1		3	1, 27	1, 53
Tehama County		49	272	441	83	24		22	1		1	1, 743	1, 875
BUTTE CREEK SUBUNIT													
D-21N/31-1A1	A. M. and R. E. Blum			6 ^a								6 ^a	6 ^a
D-21N/31-1A2	Gumers Ditch			27 ^a								27 ^a	27 ^a

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Diversion or other sources serving irrigated lands		Pasture				Orchard and Vineyard				Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous			
BUTTE CREEK SUBUNIT (Continued)														
MD&N				2 ^a								2 ^a		2 ^a
D-21N/3E-1P1	A. M. and R. P. Blum			9 ^a								9 ^a		9 ^a
D-21N/3E-2G1	Bethard Ditch													
D-21N/3E-12J1	Charles F. Cooke		8									8		8
D-21N/3E-12Q1	Charles E. Cooke													
D-21N/4E-6P1	Hal Dawson		2									2		2
D-22N/4E-5P1	C. E. Andersen												5	5
D-22N/3E-4H1	Tad Ditch		10	8						4		4		4
D-22N/3P-1M1	J. A. Field, M.D.			2										2
D-21N/3E-2/01	E. H. and Ruth Statham, et al.		13									13		13
D-22N/3E-2P1	D. C. McInespy		13									13		13
D-22N/4E-2P1	D. C. McInespy			7								7		7
D-22N/3E-23B1	Elmer B. Humphry													
D-22N/4E-2H1	L. E. and R. A. Vanegraft		13									13		13
D-22N/4E-2H1	L. E. and R. A. Vanegraft			8 ^a								8 ^a		8 ^a
D-22N/4E-2H1	L. E. and R. A. Vanegraft		11	1								12		12
D-22N/4E-2H1	Centerville Canal			6								6		6
D-22N/4E-2H1	Upper Centerville Canal													
D-22N/4E-2H1	Magalia Reservoir		6				201	50	166			423	9	432
D-22N/4E-2H1	Paradise Reservoir													
D-22N/3E-24K1	Diamond National Corp.		2									2		2

For lettered footnotes, see last page of table.

TABLE 8 (continued)
IRRIGATED LANDS
(1962, in acres)

Diversion or other sources serving irrigated lands		Pasture				Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudon	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous		
BUTTE CREEK SUBUNIT (Continued)													
D-24N/3E-30D1-30F1	L. H. Duensing		8		3								14
D-24N/4E-13F1	Kennedy Pipe				21								21
D-24N/4E-13A1	Mrs. Jean Mickey Seaman				11								11
D-26N/4E-13B1	Mickey-Mindermann Ditch				1								1
D-26N/4E-13D1	Lucas-Jones Diversion				1								1
D-26N/4E-21J1-21J2-21Q1-21Q2-21R1-26B1	Mrs. Clara M. Lucas Alice J. Bagley		63										63
D-26N/4E-22D1	McGann Estate Mrs. Clara M. Lucas Alice J. Bagley		4										4
Surface Water: Full Irrigation Partial Irrigation		0	86	24	136	0	241	50	17	0	0	2	67
TOTAL		0	86	76	136	0	241	50	17	0	0	2	71
Ground Water		0	0	0	0	0	0	0	0	4	0	0	4
Subunit Total (Butte County Only)		0	86	76	136	0	241	50	17	4	0	2	72
CAMPBELL MOUND SUBUNIT (No irrigated lands in this subunit)													

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Diversion or other sources serving irrigated lands		Pasture			Orchard and Vineyard				Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous		
CHICO CREEK SUBUNIT													
MDR2M													
D-22N/2E-22K1	Fred Rabo and Steve Meline								16				16
D-23N/2E-2J1	John F. Henning		11										11
D-23N/3E-5D1	Dr. R. N. Erickson						2 ^f						2 ^f
D-23N/3E-31C1	C. H. Kinne												
D-24N/2E-14Q1	Donald Sorensen												
D-24N/2E-29Q1	John F. Henning		14									7	7
D-24N/2E-36B1	John F. Henning		8									4	4
D-24N/2E-36R1	John F. Henning		16	4									14
Surface Water: Full Irrigation (Butte County only)			49	4			2	0	16	0		15	20
													86
COW CREEK SUBUNIT													
D-24N/1W-3D1	Coleman Canal			24									24
D-30N/1W-27P1	Wildcat Ditch												
-29A1	Pacific Power Ditch												
-29C1	Asbury Pump												
(Battle Creek Subunit)													
D-30N/1W-141	Emory and Ruby Blodgett			14									14
D-31N/1E-491	Maxine T. Williams			16								5 ^a	75
D-31N/1E-441	Maxine T. Williams				1								1
D-31N/1E-5R1	Maxine T. Williams									7 ^a		11	7 ^a
D-31N/1E-8A1	Maxine T. Williams			12								13	12
-4G1													
-9D1													
-9D2													

For lettered footnotes, see last page of table.

TABLE B (continued)
IRRIGATED LANDS
(1962, in acres)

Division or other sources serving irrigated lands		Pasture				Orchard and Vineyard				Truck		Total Irrigated	Irrigated idle or fallow	Total	
Division Location	Division Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous				
COW CREEK SUBUNIT (Continued)															
NDREK															
D-31N/1E-2E-4E	Moore T. Williams				1							1			1
D-31N/1E-15N1-15E1	M. V. and M. B. Allen				22							22			22
D-31N/1E-18E1	M. F. Allreige			62								62			62
D-31N/1E-2E1	Charles Brown			52	5							12			12
D-31N/1E-21N1	Charles Brown			21	2		2					23			23
D-31N/1E-2E1	G. E. Truett and Sons				242							242			242
D-31N/1E-30E1	Ross Edwards			56								56			56
D-31N/1E-30E2	H. F. Lovelett			12								12			12
D-31N/1E-30E1	Moore Estate						3	14				17			17
D-31N/2E-3E1	Wallace A. Thatcher				41							41			41
D-31N/2E-3E2	Wallace A. Thatcher				7							7			7
D-31N/2E-4E1	Chase Mill Ditch				74 ^f							74 ^f			74 ^f
D-31N/2E-4E1	Wallace A. Thatcher				47							47			47
D-31N/2E-3E1	Smith Ditch	4	10	17	24							55			55
D-31N/2E-3E1 (Battle Creek Subunit)															
D-31N/1W-6N1	Abbott-Jones Ditch	23	164 ^b	132	14 ^b							332 ^b			332 ^b
D-31N/1W-23N1	Sheridan Ditch	16 ^f	163 ^b	27 ^b	33 ^b	13 ^a	1		5			250 ^b	12		274 ^t
D-31N/1W-23F1	Ernest M. Wengler			23	48							71			71
D-31N/1W-35C1-35C2	Herbert J. Johnson			24								24			24
D-31N/2W-4E1	John Greve			62 ^b								62 ^b			62 ^b

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Diversion or other sources serving irrigated lands		Posture					Orchard and Vineyard			Truck		Total Irrigated	Irrigated Idle or fallow	Total	
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous				
COW CREEK SUBUNIT (Continued)															
MD3&N															
D-31N/2W-6P1	Milville Ditch		16 ^a										16 ^a	25	186
D-31N/2W-1.P1	W. H. Hunt Estate Co.		28										28		28
D-32N/1E-5K1	Lee H. Dargatz			15									15	13	28
D-32N/1E-7K1	L. E. Atkins				13								13		13
D-32N/1E-7K2	L. E. Atkins				36								36		36
D-32N/1E-7M.	Brown and Graver Ditch		35	501 ^b	6 ^a	8							550 ^b		550 ^b
D-32N/1E-8C1	John M. (Wbridge			10									19		19
D-32N/1E-9H1	L. C. Neely			14									14		14
D-32N/1E-10C1	Wren K. Grinnell				16								16		16
D-32N/1E-13R	Marian G. Haws				24								24		24
D-32N/1E-15Q1	Shasta Forests Co., Inc.			68									68		68
D-32N/1E-17C1	L. C. Neely			9											9
D-32N/1E-17J1	L. C. Neely				16 ^a								16 ^a		16 ^a
D-32N/1E-23H1	German Ditch		27	128 ^b	79		11 ^b				6 ^a		251 ^b	31	282 ^b
D-32N/1E-26J1-26K1-26L1	Durrell Faber			4			2						6	5	11
D-32N/1E-27H1	Mrs. Virginia McNeill			47									47		47
D-32N/2E-5K1	Reid L. Knight			61									61	14	75
D-32N/2E-24-25	Reid L. Knight Finner Hufferd			26									2		2
D-32N/2E-27D1	Eight-Mile Ditch			33 ^a									33 ^a		33 ^a
D-32N/2E-30D1	Eight-Mile Ditch													22	22
D-32N/1E-27E1	Hagman Gulch Diversion														

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Division or other sources serving irrigated lands		Pasture				Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total	
Division Location	Division Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery				Miscellaneous
CHICO CREEK SUBUNIT (Continued)														
MD56M					27 ^f							27 ^f		27 ^f
D-32N/2E-33L1-33L2-33F1	Wagner Flat Ditch Wallace A. Thatcher Shasta Forests Co.				45							45		45
D-32N/2E-34Q1	Henry Taylor				14							14		14
D-32N/1W-3Q1	Slaughter Pole Ditch													
D-32N/1W-4D1	Rose Briar Ditch			14 ^a								14 ^a	14	14 ^a
D-32N/1W-11C1	Hunt Ditch			26								26		26
D-32N/1W-15L1	Red Koehler			25								25		25
D-32N/1W-15R1	H. E. Bogue			385 ^b								385 ^b		385 ^b
D-32N/1W-16R1	Atkins-Koehler Ditch			8								8		8
D-32N/1W-18D1	Reineke Clover Ditch			643 ^b								625 ^b	52	677
D-32N/1W-20E1	Basset Ditch		185 ^c	51 ^b								185 ^c		185 ^c
D-32N/1W-24F1	D. N. and Merle Covey Dr. Paul Donahue			54							2	54		56
D-32N/1W-35F1	Henry H. Hartman J. D. Staiger			133								133		133
D-32N/1W-35F2	Elmer Hufford			144								160	43	202
D-32N/1W-36A1-36A2	Dean Lansing											22 ^a	20	42 ^f
D-32N/2W-20E1	Harry L. Rutherford	22 ^a										144	4	148
D-32N/2W-26N1	John Crowe		105	59								2		2
D-32N/3W-3G1	Floyd Porteous		2									8		8
D-32N/3W-9L1	Cook and Butcher Ditch		8											
D-32N/3W-16D1	Warren Ameker	6	3											

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Division or other sources serving irrigated lands		Pasture				Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total
Division Location	Division Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery			
COW CREEK SUBUNIT (Continued)													
MDR2M													
D-32N/3W-26J1	K. I. Stevenson		10									10	
D-33N/1E-5Q1-5Q2	Welch-Strayer Ditch			46								16	62
D-33N/1E-5Q1-5Q2	Welch-Strayer Ditch			20								20	
D-33N/1W-13E1	Ray Bibbens												
D-33N/1E-16N1	Worley Ditch			96 ^b							96 ^b		96 ^b
D-33N/1E-19E1	Maxwell Ditch											24	24
D-33N/1E-20A1	Bonde Ditch			5			3				8		8
D-33N/1E-20L1	Mill Ditch			311 ^b	2						322	8	330
D-33N/1E-20Q2	Rodgers Ditch				13						13		13
D-33N/1E-21A1	Gittman Ditch			62					3		76		76
D-33N/1E-23R1	R. M. Murphy			77 ^b	10						87	172	259
D-33N/1E-27M1	Warren K. Grindly Wallace E. Williams			27 ^b	4		3			2	30	37	73
D-33N/1E-32F1	Old McGinnle Ditch			39 ^a							39 ^a		39 ^a
D-33N/1E-3F1-4E1	Harry L. Rutherford			76							76		76
D-33N/1W-4K2	George Coker				50						50		50
D-33N/1W-5P1	George Sanders		16	14							30		30
D-33N/1W-6K1	J. W. Jeffman		36								56		56
D-33N/1W-13E1	Ray Bibbens			42							42		42
D-33N/1W-13E2	Ray Bibbens			14							14		14
D-33N/1W-15K1-22F1	Welch-Strayer and Welch-Miller Ditch Company		14	14 ^b	48	6			11 ^b		229 ^b	3	232 ^b

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS
(1962, in acres)

Division or other sources serving irrigated lands		Pasture				Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total	
Division Location	Division Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery				Miscellaneous
COW CREEK SUBUNIT (Continued)														
NDRLH														
D-33N/LW-1-01	Empire Litch				1							1		1
D-33N/LW-1-K	Predmore Ditch		14									14		14
D-33N/LW-1-01	Kirkwood Ditch													
E-33N/ZW-2-01	R. L. Paulsen													
D-33N/LW-2-01	Water Weir in Upper Ditch			7										
E-33N/LW-2-01	Water Weir in S. 4th Ditch													
D-33N/LW-2-02	Yerby Upper Ditch													
D-33N/LW-2-04	Cunningham Spring													
D-33N/LW-2-05	Cunningham Ditch													
D-33N/LW-2-07	R. M. Murphy, Sr.				4							4		4
D-33N/LW-2-08	S. H. Murphy, Sr.				1							1		1
D-33N/LW-2-09	P. M. Murphy, Sr.				4							4		4
E-33N/LW-2-10	R. M. Murphy, Sr.													
D-33N/LW-2-12	R. M. Murphy, Sr.				3							3		3
D-33N/LW-2-13	Murphy Slough Ditch													
D-33N/ZW-2-01	Murphy Spring													
D-33N/ZW-2-05	Estep Ditch													
D-33N/ZW-2-06	Lawrence Miller		2									2		2
D-33N/ZW-2-07	Winters Ditch			27										27
D-33N/ZW-2-08	D. M. Cannon													
D-33N/ZW-2-09	George Rickert		133 ^b										1	133 ^b
D-33N/ZW-2-10	George Rutherford													

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Diversion or other sources serving irrigated lands		Pasture				Orchard and Vineyard			Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery			
COW CREEK SUBUNIT (Continued)													
MD&M													
D-34N/1K-14K1	Louis Colbert												5
D-34N/1E-14K2	Irvy H. Jordan						5						5
D-34N/1E-14A	Louis Colbert			6									6
D-34N/1E-2 B1	Bert Miller			4			2						6
D-34N/1E-2 F2	Percy K. McMillan			7			4					30	171
D-34N/1E-32J1	Silvera Vite			3									6
D-34N/1E-35G1	Perce, E. McMillan				35								33
E-34N/1W-24C1	King Ditch			3 ^a									49 ^b
D-34N/1W-24C1	Ridwell Ditch												3 ^a
D-34N/1W-14K1	Joel W. and Clara N. Barham			15									15
D-34N/1K-29A1	Dan Greenwall			60	143		8						211
D-34N/1W-36A1	Pehrson-Grant-Jones Ditch												
Surface Water:	Full Irrigation	54	1,288	3,521	1,165	23	40	14	18	0	13	81	6,946
	Partial Irrigation	42	11	701	170	13	4	0	4	13	0	0	938
	TOTAL	76	1,299	4,222	1,335	36	44	14	22	13	13	81	7,884
Ground Water:		0	8	4,222	1,335	38	0	0	0	0	0	0	6
	Subunit Total (Shasta County Only)	76	1,307	4,222	1,335	38	44	14	22	13	13	81	7,890
DEER CREEK SUBUNIT													
(No irrigated lands in this subunit)													

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS
(1962, in acres)

[illegible]

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS

(1962, in acres)

Diversion or other sources serving irrigated lands		Pasture				Orchard and Vineyard				Truck		Total Irrigated	Irrigated idle or fallow	Total
Diversion Location	Diversion Name or Owner	Alfalfa & Mixtures	Mixed	Native	Induced High Water Table	Sudan	Apples	Walnuts	Other	Flowers & Nursery	Miscellaneous			
PAYNES CREEK SUBUNIT (Continued)														
<u>NOBREM</u>														
D-2N/2W-25R1	Pruce McIntosh		106		13							119		119
D-2N/2W-34R1	Walter Dure											5		5
D-2N/2W-40J1	Walter Dure			24								24		24
D-2N/2W-5R1	Walter Dure		16									16		16
Surface Water: Full Irrigation			241	57	13				1			342	28	342
Gravel Water			63	4								6		6
	Subunit Total (Paynes Creek Subunit)		304	61	13				1			377	28	424
Summary:														
Butte County			120		130		203		106			79	41	831
Surface Water														
Gravel Water			13	6	130		203		106			79	41	840
TOTAL			13	6	130		203		106			79	41	840
Plumas County														
Chico County														
Surface Water														
Gravel Water														
TOTAL														
Butte County														
Surface Water														
Gravel Water														
TOTAL														
Butte County														
Surface Water														
Gravel Water														
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Butte County														
Surface Water														
Gravel Water														
TOTAL														
Butte County														
Surface Water														
Gravel Water														
TOTAL														

For lettered footnotes, see last page of table.

TABLE 8 (continued)

IRRIGATED LANDS
(1962, in acres)

Footnotes

- a - Received partial irrigation only.
- b - A portion of this acreage received partial irrigation only.
- c - Acreage includes 3 acres of clover.
- d - Acreage includes 5 acres of lawn area.
- e - Lawn area.
- f - Supplemented by ground water.
- g - Acreage includes 4 acres of clover.
- h - Dry-farmed during year of survey.
- j - See also Paynes Creek Subunit
- k - See also Cow Creek Subunit

CHAPTER IV. LAND CLASSIFICATION

This chapter presents the results of a classification of the lands within the Sacramento Valley Northeast Hydrographic Unit. The lands were classified as to their suitability for development which would require intensive water service. Lands suitable for irrigated agriculture and for recreational development were mapped. Explanations of the methods and procedures used in this classification and of the criteria followed are presented in Appendix A.

The acreages of each classification in the hydrographic unit are tabulated by subunits and counties in Table 9. A total of 391,900 acres are reported in the various classes included in Table 9, which amount to about 30 percent of the unit. The remaining 70 percent consists of lands not well suited for any type of development requiring water service.

Maps showing the land classification delineations made during the survey and a legend of the land classification symbols are presented in Volume II.

TABLE 9

[illegible]

APPENDIX A

DESCRIPTIONS OF SURVEYS, STANDARDS, AND TABLES

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APPENDIX A. DESCRIPTIONS OF SURVEYS, STANDARDS, AND TABLES

This appendix provides detailed explanations concerning the surveys and data reported in the main text. It is divided into three sections, one relating to each of the three surveys. This information is generally applicable to all bulletins of the No. 94 series. Information peculiar to this hydrographic unit is given in the main text.

Water Use Survey

To report the "present use of water" in the unit, as directed by the Legislature in Paragraph (e) of the Water Code Section 232, it was first necessary to locate the surface water diversions. Those systems were located which appear to divert about 10 acre-feet or more of water per year. This minimum was adopted because it is the approximate amount of water used normally to irrigate 3 acres, the smallest parcel which could be mapped and processed by the methods used.

The locations of wells and the uses of ground water, other than its association with irrigated lands, are not reported here.

Methods and Procedures

Aerial photographs covering the entire unit and showing irrigated lands, reservoirs, etc., were the principal means of locating diversions. A list of the appropriative water rights on file with the State Water Rights Board was also helpful. In the field, some diversions were also located by investigating various water-using activities, by observing visible clues such as power lines and conduits, and by canvassing residents. Data such as descriptions of the systems, uses served, water rights, and histories were obtained through on-the-spot inspections and through interviews with the owners, operators, or other persons familiar with the various diversions. Some data thus obtained, particularly statements with regard to histories, were not verified, since a search of title records and similar sources was not within the scope of this investigation.

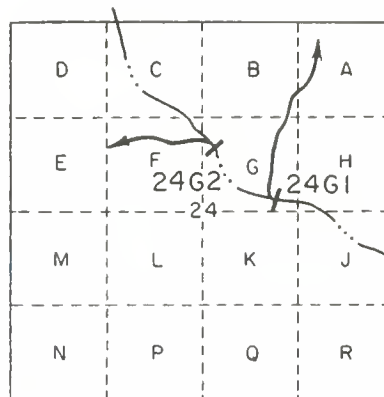
The location of each diversion was marked on the aerial photograph covering the particular area. Location numbers were assigned to all diversions as explained in the following subsection. These location numbers are used throughout the report to identify the individual diversions.

Systems only for storing water, as well as those which actually divert it from its natural course, were located. Those currently in use or to be completed within the year of survey, and also those used within the previous 5 years, unless definitely abandoned, were included. Reservoirs located along and operated in conjunction with ditches and pipelines, although mapped, were not considered as separate systems, and no location numbers were assigned to them. Similarly, points at which diversion conduits intercepted minor intermittent streams, and apparently received less than 10 acre-feet of water in addition to the primary supply, were not considered as separate diversions.

A system by which field runoff and/or spill from a diverter's own operation was collected was not considered a diversion nor assigned a location number. Systems which rediverted return flow from another water user's operation, however, were delineated and assigned location numbers.

Location System

Each surface water diversion is identified by a diversion location number. The location of a diversion on the aerial photograph, as determined in the field, was plotted on the U. S. Geological Survey quadrangle map of the area. Each location number includes the numbers of the township, range, and section in the federal land survey system where the diversion is situated. The sections are subdivided into 40-acre plots (quarter-quarter sections), and these are indicated in each location number by a letter following the section number. For example, in the illustration at the right, a diversion D-44N/2W-24G1, labeled "24G1", is in the southwest quarter of the northeast quarter of Section 24, Township 44 North, Range 2 West, Mt. Diablo Base and Meridian (MDB&M). Additional diversions in the same 40-acre plot are distinguished by replacing the final number "1" with a "2" or "3", etc., as for diversion D-44N/2W-24G2, etc.



Descriptions of Surface Water Diversions

The physical descriptions, histories, water rights, and other information relating to surface water diversions are given in the table, "Descriptions of Surface Water Diversions". Within the respective subunits, the diversions are listed by their location numbers in numerical order by township, range, and section. Each location number is followed by the name of the diversion and/or owner, the source, the purposes served, and the extent of use in the year of the survey. If a diversion did not serve its usual purpose in the year of the survey, this fact is noted in the "Remarks" column. The extent of domestic use is specified only when five or more connections are served. Watering of less than ten head of livestock is classified under domestic use.

Information concerning the water right on which each diversion is based, including the type, quantity, and reference to official record, if known, is reported in the "Apparent Water Right" column. This information as to the water rights under which the various diversions are made was obtained from the party interviewed, from files of the State Water Rights Board, and from other official records or sources available.

Although the reported water rights information meets the requirements for "apparent claims of water right" for the purposes of this investigation, its publication herein is not to be construed as evidence in confirmation of those claims. It should not, therefore, be used in the legal determination of water rights. A brief explanation of California Water Rights Law is presented in the following section.

Detailed descriptions of diversion systems, including dams, pumps, and main conduits, as well as any special features, are given in the "Description of System" column. The diversions are classified as gravity, pump, or storage, according to the following definitions:

Gravity diversion - A system by which water is taken from its natural course at a diversion structure and conveyed by gravity through a canal or pipeline to the area of use. Such a diversion may have a reservoir on the stream, but the capacity is small compared with the amount of water diverted and provides no significant carryover seasonal storage.

Pump diversion - A system by which water is pumped from its natural course through a pipeline to the area of use or to a gravity conduit located at a higher elevation.

Storage diversion - A system consisting of or including a surface reservoir having significant carryover storage within each season or from season to season.

Systems not exclusively of one of these basic types are listed as combinations of those types which best describe them.

The "Remarks" column contains such information as the names of former owners, known changes of ownership after the year of study, combinations of diversions serving the same use, and special details explaining entries in the other columns.

California Water Rights

In California, water rights convey only the right to use water. Until absolute possession of water is acquired by some artificial means, no one owns water. However, the owner of water rights is entitled to enjoy them without interference by other users who have rights which are inferior to his.

Five kinds of water rights are recognized in California. These are riparian, overlying, appropriative, prescriptive, and pueblo. Riparian rights attach to surface water and water flowing in known and definite subterranean channels, while overlying rights attach only to underground water. Appropriative and prescriptive rights may be acquired in either surface or underground waters. Pueblo rights are now exercised in California only by the cities of Los Angeles and San Diego, each of which has a paramount right to satisfy its full needs from the stream system of waters flowing by the former Mexican pueblo from which each sprang.

All water rights, both to surface and to underground water, are subject to the doctrine of reasonable beneficial use expressed in Section 3 of Article 14 of the California Constitution, and Water Code Sections 100 and 101. This doctrine limits water rights to the quantity of water reasonably required for beneficial use and prohibits waste, unreasonable use, and unreasonable methods of use or diversion.

Riparian Rights. A riparian right entitles the owner of lands which border or front on a watercourse to take water therefrom for use on such lands within the same watershed. However, the rights of the owner of riparian land are limited to the reasonable beneficial use of the natural flow of water which passes his land. Riparian rights pass with the title to the land, unless expressly reserved or exempted from the interests transferred, and are not gained by use or lost by mere nonuse. Although the land must be contiguous to the watercourse, the length of the frontage is not determinative of the rights; a large tract with a small frontage on a stream may be riparian to the stream. But the original grant determines the character of the land, and only the smallest contiguous tract held under a single title retains riparian rights.

A riparian owner has no right to any specified amount of the water of a stream as against other riparian owners. He has rights only to a reasonable share from the stream -- a correlative right which he shares mutually with other riparian owners. In the event of insufficient water for all, the available supply must be apportioned, except that an upper riparian owner may take the whole supply if necessary for domestic use. As against appropriators, the riparian owner has the paramount right to all the water of the stream which he can put to reasonable beneficial use; but that is the extent of his rights, and the appropriator can take the surplus.

Riparian rights do not authorize use of water on nonriparian land, nor do they permit the seasonal storage of water. They do not prevent temporary appropriation by others of water not presently needed for use on riparian land.

A parcel of land becomes nonriparian when severed from land bordering the stream, unless the riparian rights are reserved for the severed parcel by the grantor. Riparian rights may be destroyed when purportedly transferred apart from the land by grant, contract, or condemnation, and may be impaired or lost through prescription.

Overlying Rights. Owners of lands overlying a common underground water supply have the right to withdraw water for reasonable beneficial use on their overlying lands. Such overlying rights are analogous to riparian rights, in that both are based on ownership of land contiguous to the supply and the rights of each overlying or riparian owner are mutual and correlative to the rights of all other owners of lands similarly related to the supply. In the case of insufficient water to fully supply the requirements of all, the available supply must be equitably apportioned.

Overlying rights do not include use of water on nonoverlying land. However, surplus water not presently required for beneficial use on overlying land, and which may be withdrawn without creating an overdraft on the ground water supply, may be appropriated for use on nonoverlying land. But the overlying rights are paramount and all appropriative rights are subject to the future requirements of overlying land.

Appropriative Rights. An appropriation of water is any taking of water for use without riparian or overlying rights, whether such taking is from the underground by wells or from surface streams by direct diversion or storage. An appropriator, in the legal sense, is one who takes water without possessing rights which are based on the ownership of land. As between appropriators, the one first in time is first in right. A prior appropriator may take all the water he needs up to the full amount to which he is entitled before a later appropriator may take any.

Normally, appropriative rights are inferior to riparian rights. An exception to this is the case of an appropriation of water diverted from streams flowing through vacant public lands before the riparian lands were withdrawn from the domain of the United States. The appropriative diversions or the lands they serve may be either upstream or downstream from the riparian lands.

Any water not needed for the reasonable beneficial uses under prior rights to a supply may properly be appropriated. The priority of an appropriative right, as against another appropriator, is related back to the first substantial act toward putting the water to use or to the date of application.

Sections 1410 through 1422 of the Civil Code, enacted in 1872, established, as the first statutory regulation, a permissive procedure for perfecting an appropriation of surface water. Provision was made for posting a notice of appropriation at the proposed point of diversion and recording a copy with the county recorder. If the statutory procedure were followed and the appropriation completed with due diligence, priority was established only when the water was put to beneficial use.

Since the effective date of the Water Commission Act of 1913, December 19, 1914, appropriation of surface water and water in subterranean streams flowing in known and definite channels has been by compliance with required statutory procedure. An appropriation of such water now can be made in accordance with the provisions of Part 2, Division 2 of the Water Code (Water Code Sections 1200 to 1801). An application to appropriate unappropriated water must be filed with the State Water Rights Board. If the application is approved, a permit is issued authorizing the appropriation. When the appropriation has been completed, an inspection is made and a license is issued, to the extent of beneficial use, provided the terms and conditions of the permit have been fulfilled. The priority of a permit or license relates back to the date of the application.

A right to appropriate water may be lost either by abandonment or by continuous nonuse. To constitute abandonment, there must be concurrence of act and intent, wherein possession is relinquished with no intent to resume it for a beneficial use. Abandonment is, therefore, always voluntary and factual. In the case of an appropriation initiated prior to 1914, continuous nonuse for a period of 5 years results in the loss of the right. In the case of appropriative rights acquired pursuant to the Water Commission Act or the Water Code, continuous nonuse for a period of only 3 years may result in loss of such rights.

Where ground water and surface water are interconnected, one acting as a tributary to the other, both are treated as part of a common supply and users of water from either source are entitled to protection from substantial injury as a result of use by others of water from the other source. Thus, an owner of land riparian to a stream may have his right to the use of water protected against impairment by an appropriator of percolating ground water tributary to the stream and required for the maintenance and support of its flow. Likewise, where water from a stream percolates to a ground water basin or stratum, the owner of land overlying the ground water supply may be protected from an appropriation of water from the stream if this causes a substantial impairment of the ground water supply. As between riparian use of surface water and overlying use of ground water tributary to the stream, the available water supply should be shared by the owners on the basis of reasonable beneficial use.

Surplus ground water not flowing in known and definite subterranean channels is still present in many areas of the State. Such surplus water may be appropriated for use on nonoverlying lands simply by extracting it and putting it to beneficial use. In Southern California, adjudication of some basins prohibits further appropriation of ground water. In Los Angeles, Riverside, San Bernardino, and Ventura Counties, reporting of ground water pumped is required under certain conditions.

Prescriptive Rights. It is possible to appropriate surface or ground water which is presently needed by others having riparian, overlying, or prior appropriative rights. Such appropriations may ripen into prescriptive rights where the use is actual, open and notorious, hostile and adverse to the original owners, continuous and uninterrupted for the statutory period of 5 years, made under claim of right, and with payment of taxes whenever such have been levied on the water rights. Absence of any of these essentials precludes the acquisition of prescriptive water rights.

Prescription thus requires that, for 5 years, the rightful owner either knows or should know of the adverse taking and fails to take any physical or legal steps to interrupt such taking. Irrespective of the needs or demands of the riparian, overlying, or prior appropriative user, an absolute right to only a fixed amount of water may be acquired by prescription. The quantity of such a right is determined by beneficial use. However, present use is the measure of the prescriptive right, and future needs cannot be included.

Riparian rights, overlying rights, appropriative rights, and prescriptive rights may be lost or diminished by prescription. While sufficient water is flowing in a stream to supply the wants of all parties, the use of the water by anyone does not deprive the others of their water supply. Such use is not an invasion of their rights and cannot, therefore, be a basis for a prescriptive right. The same principle applies to a downstream diversion of water as against the rights of an upstream riparian landowner or prior appropriator. At times when the safe yield of a ground water basin exceeds the needs of overlying landowners and appropriators, their

prior rights are not invaded by a later appropriative taking of water from the underground supply. The later appropriation becomes adverse only when the ground water basin is overdrawn; that is, when the annual draft exceeds the safe annual yield. Although neither an overlying owner nor a prior appropriator may prevent a taking of surplus water, either the owner or the appropriator may institute legal proceedings to safeguard the supply once a surplus ceases to exist, and may enjoin any additional use beyond the point of safe yield. Since prescriptive rights can be acquired only to nonsurplus water, these rights cannot ordinarily be acquired against the future needs of riparian or overlying owners.

The prior appropriator, lower riparian, or overlying owner may protect his rights for his present needs against an adverse appropriator by actually taking the needed water before the 5-year period has run, or by the aid of the courts in the form of a declaratory judgment or injunction within the 5-year period.

Determination of Water Rights. Under provisions of the Water Code, actions brought before either state or federal courts which involve determination of rights to the use of water may, at the court's discretion, be referred to the State Water Rights Board. Under provisions of Water Code Section 2000, the court may appoint the Board to referee "any or all issues involved in the suit", or under Section 2001, it may limit the reference to "investigations of and report upon any or all physical facts involved". This reference procedure may be followed in suits involving either surface or ground waters, or both.

An alternative procedure for adjudication of rights to the use of water of streams, lakes, and other bodies of water, is available upon petition to the State Water Rights Board, but the method excludes the determination of rights to take water from an underground supply other than from a subterranean stream flowing through known and definite channels. Water Code Sections 2500 to 2900, inclusive, authorize the initiation of such proceedings.

Land Use Survey

In this survey five categories of land uses were mapped -- irrigated lands; dry-farmed lands; urban lands; recreational lands; and naturally high-water-table lands, such as meadowlands and marshes. Lands not included in any of these five categories were mapped as "native vegetation". General descriptions of the field and office procedures and of the land use categories are given in the following pages.

Methods and Procedures

Field Work. The land use survey was accomplished through (1) an intensive field inspection of the unit to identify all parcels of land devoted to specific uses, and (2) delineation of these parcels on aerial photographs.

The unit was traversed by automobile as completely as roads and terrain permitted. Areas inaccessible by automobile were inspected on foot where necessary. The use of stereoscopes to bring out relief was of great assistance in identifying on the photographs the areas of land use observed.

In the survey, both the major use categories and the specific uses of individual parcels were determined. Each parcel of land was identified on the photograph on which it appeared and was then delineated and labeled according to the symbol designation system described in detail in the "Standard Land Use Legend" included in Volume II. An example of land use delineated on an aerial photograph is given on page 103.

Office Procedures. Processing of the field data consisted basically of (1) preparing maps of the field delineations, and (2) determining acreages of all the mapped areas.

After the field mapping, the data delineated on the photographs were transferred to copies of U. S. Geological Survey quadrangle maps having a scale of 1:24,000. This reproduction of the delineated areas at a common scale was necessary for accurate determination of acreages because of variation in the scale of the aerial photographs. A series of these maps showing the diversion systems and the major land use categories identified by colors was used for review and checking.

Another set of maps showing the projected areas was used in computing the acreages of the land uses. The delineated areas on these maps were manually cut out and carefully weighed on an analytical balance. The weights were converted to acreages by using the ratios of weight to acreage determined for the individual maps. This method has proven to be a very expedient and accurate means of area determination where many small parcels are involved. Reduced copies of these maps are presented in Volume II of this report. Each of these maps covers 7-1/2 minutes of latitude and longitude.

Complete tabulations of all land uses in the unit -- by county, by subunit, and by the "7-1/2-minute" quadrangles -- were obtained by machine data processing methods. The acreage data presented in this report are taken from the machine tabulations. The complete tabulations are kept on file by the Department of Water Resources.

Land Use Categories

Irrigated Lands. Irrigated lands, as designated in this report, include all agricultural lands which receive water artificially. These lands when noted in the field survey, were identified by the symbol "i" on the aerial photograph. The fields normally irrigated, whether or not irrigated in the year of survey, were identified with their respective water sources. "Idle" irrigated lands are defined as lands which were not irrigated in the year of survey but had irrigation facilities and had been irrigated within the

preceding 3 years. "Fallow" irrigated lands are those cultivated lands which have irrigation facilities and are normally irrigated, but at the time of survey were tilled and not cropped.

A special group, "partially irrigated" lands, includes those lands which, for some reason, received less than a full season's irrigation in the year of survey.

The irrigated lands within the various subunits are reported in Chapter III in the table entitled "Irrigated Lands", with the source of water indicated. The acreage of each crop group is reported, as well as that of land usually irrigated but not cropped in the year of survey.

Naturally High Water Table Lands. In addition to the irrigated lands described above, there are lands supporting vegetation which uses water from a naturally high water table. These include such lands as mountain meadows and certain lands adjacent to lakes and streams. This category is divided into two classes: "meadows", where the water table is normally below the surface; and "marshes", which are under water much of the year.

Dry-farmed Lands. Dry-farmed lands are those lands normally in crop but which do not receive applied water. This category includes all lands so farmed, whether in crop or "fallow" at the time of survey. Lands were classified as "fallow" if tilled but without a crop. Lands which were neither cropped nor fallow were mapped as "native vegetation".

Urban Lands. Urban lands include the total areas of cities, towns, small communities, and other developed residential, commercial, or industrial plots large enough to be delineated. Also included are parks, golf courses, race tracks, and cemeteries within or near urban areas. The reported acreages of urban land use represent gross delineations, including streets and vacant lots, and are therefore not necessarily fully developed at the time of survey. In this survey, the boundaries of urban communities were delineated to include all lands with a density of one house or more per 2 acres.

Recreational Lands. Four categories of recreational lands were mapped on the aerial photographs: (1) residential, (2) commercial, (3) camp and trailer sites, and (4) parks. Recreational "residential" lands include permanent and summer home tracts within primarily recreational areas. The estimated density of homes per acre was also indicated in the course of the survey. Recreational "commercial" lands include those containing motels, resorts, hotels, stores, restaurants, and similar commercial establishments in primarily recreational areas. Lands mapped in the "camp and trailer sites" category include those areas so used within primarily recreational areas and outside the boundaries of public parks. The entire area within the designated boundaries of public park-type tracts such as national monuments and parks, state parks, etc., are included in the "parks" category.

Obviously, nearly all the mountainous, seashore, and water surface areas are suitable for some recreational use, such as hunting, fishing,

hiking, picnicking, or water sports. However, for the purpose of this land use survey, except within the "parks" category, a recreational use was reported only on those lands occupied by some type of recreational development requiring water service.

Native Vegetation. Lands which were essentially in a native state, excluding water surface areas, were mapped as "native vegetation". Scattered residences and other isolated uses too small to be delineated were also included in this category. However, in the original tabulations, the total acreage in this "native vegetation" category included lands which were mapped as water surface areas, farmsteads, etc. In most areas, much of the "native vegetation" land is used for commercial timber production, livestock range, or recreational activities such as fishing, hunting, hiking, and picnicking.

Land Classification Survey

Information as to the suitability of lands for irrigated agriculture or other water-requiring activities is the most vital information needed in determining the future water requirements of these lands. In the past, the Department of Water Resources has conducted reconnaissance land classification throughout the State. More detailed and uniform surveys covering the whole State are now needed. These surveys, now being performed, are being reported in the No. 94 Series of bulletins. Classification of lands suitable for water-using recreational development, which was not previously done, is also included in these surveys. This section describes the procedures and standards followed in these surveys.

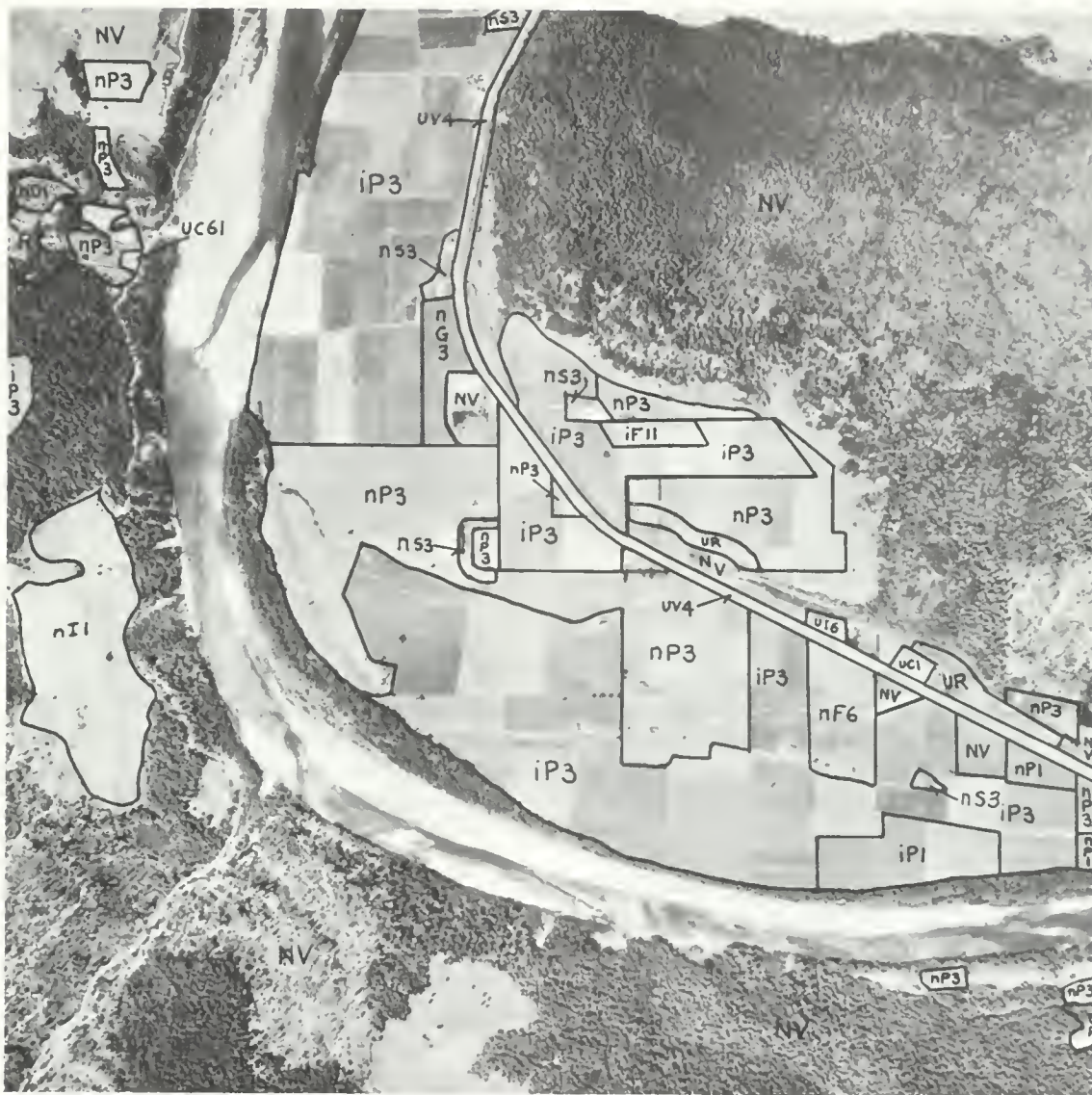
The acreages of each classification are enumerated by subunits in the table, "Classification of Lands". Delineations of these classified lands are presented on the land classification figures in Volume II. A legend of all land classes and corresponding symbols is included with the figures.

Methods and Procedures

The general methods and procedures used in field mapping, area determinations, and tabulation of acreages were essentially the same as those described for the land use survey. An example of land classification delineated on an aerial photograph is given on page 106. Complete machine tabulations of acreages, from which the data presented in the "Classification of Lands" table were extracted, are on file in the Department.

Major Categories of Land Classes

The lands mapped are grouped into four major categories: (1) irrigable lands, (2) urban lands, (3) recreational lands, and (4) miscellaneous lands. These categories are described in detail in the following paragraphs. Lands not meeting the requirements for these classes might be considered a separate class but are not specifically defined.



Example of Land Use Delineated on Aerial Photograph

Symbols are explained in "Land Use Legend", pages 2 and 3
of Volume II.

Irrigable Lands. Irrigable lands are classed according to their crop adaptability and their suitability for development under irrigated agriculture. The time element with respect to when the lands might be developed did not enter into these determinations, except that suitability for irrigated agriculture was necessarily considered in the light of present agricultural technology.

Of the many factors which influence the suitability of land for irrigation development, soil characteristics and the physiography of the landscape are the most permanent and are, therefore, the only ones considered in the survey. Soil characteristics were determined by examination of road cuts, ditch banks, and the material from test holes, together with observations of the type and density of native and cultivated vegetation and crops. Representative slopes throughout the area were measured with a clinometer. Other aspects, such as those economic factors related to production and marketing, location of lands with respect to a water supply, and climatic conditions, were not considered in the basic classification. The latter factors are very important in estimating the nature of future cropping patterns and practices and will be duly considered when future water requirements are estimated.

Urban Lands. It is recognized that future urban expansion will encroach upon some of the irrigable lands. The location and extent of this type of development is a function of many variables. Because this land classification survey is an inventory of relatively unchanging physical conditions, no attempt was made to locate the areas of future urban encroachment. Therefore, only those lands devoted to urban uses during the land use survey, including cemeteries and golf courses near urban areas, are designated as "urban" lands.

Recreational Lands. Present trends indicate an expanding rate of use and demand for recreational facilities throughout the State. In view of these trends and the ever-increasing population, it is recognized that there will be a demand for substantial land areas for recreation. This is particularly true of the mountainous and coastal regions, where this type of development is expanding rather rapidly.

Nearly all the mountainous and coastal lands are suitable for some recreational use such as hunting, fishing, and similar outdoor activities. For purposes of this survey, however, lands classified for recreational use are limited to those which are now, or may be in the future, used intensively for (1) permanent and summer home tracts, (2) camp and trailer sites, (3) commercial establishments such as motels, resorts, etc., in primarily recreational areas, and (4) parks outside urban areas. These are uses which, when developed, will require water service.

Primary considerations for classification of home tracts and camp and trailer sites were (a) physical factors such as soil depth, slope, and rockiness, (b) aesthetic values such as view, proximity to lakes, streams or seashore, and density and type of forest canopy suitable for the various uses, and (c) the plans of federal and state forest officials. Availability

of a water supply was an important factor in the selection of potential camp and trailer sites, but remoteness from roads did not influence site selection.

As in the land use survey, the total areas of existing federal and state parks and monuments, rather than the specific areas of potential intensive development therein, are included in the "parks" class. For other parks, only the areas presently developed to intensive recreational use are shown. No attempt has been made to predict where additional park developments will take place.

Miscellaneous Lands

"Irrigable forest and range" lands are those lands having physical characteristics which meet the requirements for irrigable lands, but due to physiographic position, climatic conditions, and factors associated with their present utilization, they were classified as better suited to remain under forest or range management. Lands which were designated in the land use survey as "marshlands" were identified in the classification survey as "Vm".

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